Addendum #13 to
Field Sampling Plan for Part 2 of the Supplemental Groundwater Remedial Investigation
Former York Naval Ordnance Plant
1425 Eden Road, Springettsbury Township
York, Pennsylvania

Prepared for Harley-Davidson Motor Company Operations, Inc.
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Restart of Groundwater Extraction System in the West Parking Lot (WPL)

1.0 Introduction

Addendum 13 of the Field Sampling Plan for Part 2 of the Supplemental Groundwater Remedial Investigation (FSP) (GSC, October 16, 2013) provides a brief update of the ongoing investigations outlined in Addendum 11 regarding the groundwater tracing and surface water chemistry collected during monitored shutdown of the West Parking Lot (WPL) groundwater extraction system and describes plans for continuing the investigations into start-up of groundwater extraction wells.

2.0 Preliminary Results of the Ongoing Dye Testing and Monitored Shutdown of the WPL Groundwater Extraction System

Testing was conducted in accordance with plans described in Addendum 11 involving groundwater tracer testing to investigate intermediate and deep karstic flow pathways. **Test 1** was a tracer test designed to confirm capture of groundwater in deep karst features in the southwest corner of the WPL (SW-WPL) conducted while the groundwater extraction system was operating. **Test 2** was a tracer test conducted with the groundwater extraction system turned off, and the aquifer given time to recover from pumping. Dyes were injected into wells to

determine whether the shallow, intermediate and deep karstic groundwater flowing beneath the Site discharges to Codorus Creek under non-pumping conditions. In addition, groundwater and surface water samples were collected prior to and after extraction system shutdown, and analyzed for numerous parameters, including volatile organic compounds (VOCs), alkalinity and common ions.

Near the end of December when the Addendum 11 investigation was planned to end, a work scope was developed to extend the shutdown test based on the results of the study in order to conduct additional tracer studies with the extraction system off, and to continue monitoring to the surface water and groundwater for VOCs, alkalinity, and common ions. This plan was described in a December 30. 2013 letter to Ms. Pamela S. Trowbridge of the Pennsylvania Department of Environmental Protection (PADEP) and Mr. Griff Miller of the United States Environmental Protection Agency (USEPA). The plan described in the letter was approved by USEPA on January 7, 2014, and by PADEP on January 15, 2014. The December 30, 2013 letter is included as Appendix A to this addendum.

A brief description of results from the extended shut down test is included for the purpose of supporting the work scope proposed in this Addendum 13. A complete report will be included in the Supplemental Groundwater Remedial Investigation – Part 2 report.

2.1 Test 1 – SW-WPL Deep Karst Capture Analysis

On November 11, 2013, fluorescent dye Sulphorhodamine B was injected into well CW-20 in the southwest corner of the West Parking Lot (SW-WPL) while the groundwater extraction wells in the WPL were active. Within 24 hours, dye was detected in extraction well CW-9, in the groundwater treatment plant, and in Codorus Creek, as a result of the treated groundwater discharge. **Figure 1** shows a map of the path of the dye from **Test 1**.

2.2 Test 2 – Levee Wells to Codorus Creek

The groundwater extraction system was shut down on November 25, 2013. **Test 2** was initiated 22 days after shutdown of the extraction system. Three different dyes were injected into three Levee wells located along the east bank of Codorus Creek on 12/17/2013. These wells intersect

karst features between 211 and 216 feet deep (MW-147A), between 132 and 142 feet deep (MW-99D), and between 103 and 121 feet deep (MW-100D). The karst encountered in MW-147A represents a deep karstic pathway adjacent to Codorus Creek, and the karst encountered in MW-99D and MW-100D represents the shallow to intermediate pathways through this area.

The following tracers were injected:

- Rhodamine WT into MW-147A,
- Fluorescein into MW-99D, and
- Eosine into MW-100D.

Figures 2, 3, and **4** show the path of dyes from each of the wells detected in water samples and dye receptors. In summary, the results show that under non-pumping conditions, dyes travel in groundwater to wells along the eastern side of the creek parallel to the creek and in all cases, discharge to the creek. In the case of Rhodamine WT, there were a number of spurious results believed to be caused by dye from others sources. These results and pathways are labeled with question marks at this preliminary stage in the analysis of the data, and will be evaluated in more detail in the Supplemental Groundwater Remedial Investigation – Part 2 report.

2.3 Codorus Creek Flow Monitoring and Water Quality Results

The flow in Codorus Creek upstream and downstream of the Site and the discharges to Codorus Creek were not measured after recovery of the aquifer from pumping, because creek flows were too high to safely conduct the measurements. **Figure 5** shows the Codorus Creek discharges from a USGS gauging station located 2 miles south of the city of York, and approximately 4 miles upstream of the Site. The period of record shown is from the beginning of the study period to present (March 21, 2014), along with the median daily average. The graph indicates that the ongoing studies have been conducted during periods of higher than average flows.

Surface water quality information has been distributed to USEPA and PADEP as it becomes available from the laboratory. The chemistry data on Table 1 was originally shared by email on March 7, 2014. As described in the periodic emails, there have been increases in Site-related chemicals of concern (COCs) after extraction system shutdown compared to concentrations from

samples taken while the extraction system was pumping. These changes are illustrated on the following figures:

- **Figure 6** is a graph of TCE series compounds (trichloroethylene [TCE], tetrachloroethylene [PCE], cis-1,2-dichloroethylene [CIS1,2DCE], and vinyl chloride [VC]) from water samples collected in the Codorus Creek at Station SW-6, which is upstream of the Site and near the east bank (refer to **Figure 4** for location of sampling stations) . Concentrations prior to shut down of the extraction system are less than 0.4 µg/l and are even less after system shutdown, presumably due to dilution caused by higher flows in the creek.
- **Figure 7** is a graph of TCE series compounds from water samples collected in the Codorus Creek at Station SW-8, which is downstream of the Site and near the east bank of the creek. Concentrations prior to shutdown of the extraction system are similar to upstream concentrations shown on **Figure 6**. After shutdown, concentrations, particularly PCE increased.
- **Figure 8** is a graph of TCE series compounds from water samples collected from SW-17, a submerged spring that discharges along the east bank of Codorus Creek west of the SW-WPL. This graph illustrates a marked change in concentrations, particularly PCE after extraction wells were shut down. These samples would not have been diluted by higher creek flows because they were sampled discretely from the spring discharge source.

2.4 Additional Dye Tracing

Green dye #8 (also called Pyranine) was injected into CW-20 in the SW-WPL on January 31, 2014 while the groundwater extraction system remained off. Within 5 days the dye was detected in MW-147A, and within 11 days it was detected in SW-17, confirming the connection between the deep karst features in the SW-WPL with deep karst features along the east side of the creek (MW-147A) and with the shallow karst features along the east side of the creek (SW-17). This information is illustrated in **Figure 9**.

Sulphorhodamine B dye was injected into CW-17, a groundwater extraction well in the north-central portion of the WPL that intersects a large cavern on March 7, 2014, during non-pumping conditions. No results are available at this time.

3.0 System Restart

As a result of the preliminary analysis of the recently collected data from the groundwater extraction system shutdown test and tracer studies, fYNOP plans to restart the extraction system incrementally, while continuing to collect groundwater level measurements, and analyze groundwater and surface water samples for volatile organic compounds, common ions and alkalinity. Start-up is planned for April 3, 2014, dependent on weather and allowing for sufficient time to obtain results from the latest dye injection.

3.1 CW-20 and CW-9 Start-up

The condition of the aquifer and the record of groundwater and surface water chemistry results collected prior to and after the extraction system shutdown provide a baseline for comparison as changes are imposed on the groundwater flow system in the SW-WPL area. The following test is designed to demonstrate the level of impact that pumping individual wells or pairs of wells may have on groundwater and surface water quality. The increase in COC chemistry in submerged spring discharge SW-17 and a comparison of the concentrations in downstream samples suggests that SW-17 may be the largest source of flux to the creek from the Site.

To test this hypothesis and to attempt to better understand the connectivity of the karst aquifer in this portion of the Site, a previously inactive groundwater extraction well CW-20, located in the SW-WPL has been fitted with a pump, power, controls, and conveyance line. This well was constructed and aquifer testing using this well was conducted in 2006. A report titled “CW-20 and West Parking Lot Collection System Pumping Test Report” (SAIC, June 2008) described the construction and testing. This well will be pumped at the capacity of the pump and conveyance system, estimated to be approximately 100 gallons per minute (gpm).

Depending on the pumping rate that can be maintained in CW-20, existing well CW-9 may be activated. This well has been shown to be directly connected by a karst conduit to CW-20

through dye tracer tests and aquifer pumping test observations. If sufficient capacity (close to 100 gpm) is maintained in CW-20, and drawdown is clearly apparent in the surrounding wells, CW-9 will not be activated.

Approximately 20 water level recorders will be maintained in wells throughout the Central Plant Area (CPA), WPL and along the Codorus Creek. These will be placed at least one week prior to initiation of pumping in CW-20. As water level data is collected and reviewed, recorders may be moved around to collect information on specific areas of interest.

This initial phase of the system restart is planned to be approximately ten weeks in length, ending June 10, 2014. A summary of activities is described below. **Table 2** includes detailed descriptions of each step of the project that will be used to manage the project. The portion of the table highlighted in green is the proposed tasks described in this addendum, while the unhighlighted tasks are part of the testing that was or is being completed.

- After approximately two weeks of pumping and at two week intervals, all surface water stations (16 stations) shown on Figure 10, and five or six selected wells will be sampled, and the water analyzed for VOCs, alkalinity and common ions. In addition to the surface water stations shown on the figure, an additional station has been established approximately one half mile downstream from SW-8 at the railroad bridge. This station was added to represent the concentration of the creek in this location, where the stream is believed to be completely mixed due to the sharp turn to the east a few hundred feet upstream from the railroad bridge. These stations will be sampled at two week intervals for a total of four rounds of samples.

- After four weeks of pumping, and at four week intervals, manual water levels will be collected in all available wells within the area generally shown on **Figure 10**. In addition all wells shown highlighted on **Figure 10** will be sampled, for a total of two complete rounds.

3.2 Next Steps

We will continue to evaluate the data as it is collected. Depending on results, consideration will be given to restarting one or more of the remaining extraction wells (CW-13, CW-15A, CW-17) in the WPL while continuing a similar monitoring program. When the decision is made, a notice will be prepared, but details of the monitoring are anticipated to be similar to the proposed plan. Only if the details differ significantly would an additional addendum be submitted for review.

Also depending on the results of testing, consideration will be given for another shutdown test during late summer and early fall. If conducted, water quality of the creek would be monitored to evaluate the conditions during typical low stream flow conditions. If the testing indicates a summer/fall shutdown test would be useful, a detailed addendum would be prepared for review and approval.

4.0 References

GSC, 2011. Supplemental Remedial Investigation Groundwater Report (Part 1) Former York Naval Ordnance Plant, September.

GSC, 2012. Field Sampling Plan (FSP) for Part 2 of the Supplemental Groundwater Remedial Investigation, April.

GSC, 2012. Quality Assurance Project Plan – Former York Naval Ordnance Plant, June.

SAIC, 2008. CW-20 and West Parking Lot Collection System Pumping Test Report, June

Tables

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-6-0/1-0 8/22/2013	HD-COD-SW-6-0/2-0 8/22/2013	HD-COD-SW-6- 0/1-0 9/26/2013	HD-COD-SW-6-0/1-0 11/21/2013	HD-COD-SW-6-0/1-0 1/17/2014	HD-COD-SW-6-0/1-0 1/23/2014	HD-COD-SW-6-0/1-0 2/4/2014	HD-COD-SW-6-0/1-0 2/20/2014
Volatile Organic Compounds (GC/MS) ug/L								
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DiBromoethane (EDB)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone (MEK)	5.0 U	0.63 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	5.0 U	5.0 U	5.0 U	9.8	5.0 U	3.3 J	5.0 U	5.0 U
Acrylonitrile	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon disulfide	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ChloroBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	1.0 U	0.28 J	0.39 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DiBromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
EthylBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-Butyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	0.29 J B	0.27 J B	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	0.21 J	0.30 J	0.33 J	0.22 J	1.0 U	1.0 U	0.18 J	1.0 U
Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

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Harley-Davidson FYNOP

Analyte	HD-COD-SW-6-0/1-0 8/22/2013	HD-COD-SW-6-0/2-0 8/22/2013	HD-COD-SW-6- 0/1-0 9/26/2013	HD-COD-SW-6-0/1-0 11/21/2013	HD-COD-SW-6-0/1-0 1/17/2014	HD-COD-SW-6-0/1-0 1/23/2014	HD-COD-SW-6-0/1-0 2/4/2014	HD-COD-SW-6-0/1-0 2/20/2014
Metals (Total) ug/L								
Antimony	0.18 J	0.23 J	0.20 J	0.039 J	NA	NA	NA	NA
Arsenic	1.0 U	0.48 J	0.65 J	1.0 U	NA	NA	NA	NA
Barium	42 B	35 B	44 B	41	NA	NA	NA	NA
Beryllium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Cadmium	1.0 U	0.15 J	1.0 U	1.0 U	NA	NA	NA	NA
Calcium	41000 B	36000 B	41000	44000 B	NA	45000	NA	31000
Chromium	0.68 J	0.94 J	1.4 J	2.2	NA	NA	NA	NA
Copper	3.8	4.7	2.1	1.5 J	NA	NA	NA	NA
Lead	0.56 J B	1.1 B	1.3 B	0.23 J B	NA	NA	NA	NA
Magnesium	10000 B	9600 B	11000	10000	NA	8900	NA	9800
Mercury	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA	NA	NA
Nickel	1	0.92 J	0.83 J	0.62 J	NA	NA	NA	NA
Potassium	4900 B	5500 B	6500	6600	NA	2400	NA	3800
Selenium	5.0 U	5.0 U	0.68 J B	5.0 U	NA	NA	NA	NA
Silver	1.0 U	1.0 U	0.23 J	1.0 U	NA	NA	NA	NA
Sodium	37000 B	38000 B	56000	51000 B	NA	43000 B	NA	44000
Thallium	1.0 U	0.15 J B	0.026 J B	1.0 U	NA	NA	NA	NA
Vanadium	1.5	1.7	1.1	1.2	NA	NA	NA	NA
Zinc	9.5	8.1	7.1	7	NA	NA	NA	NA
Metals (Dissolved) ug/L								
Antimony	0.12 J B	0.13 J B	0.20 J	0.18 J	NA	NA	NA	NA
Arsenic	0.42 J	1.0 U	0.44 J B	1.0 U	NA	NA	NA	NA
Barium	40	37	43	42 B	NA	NA	NA	NA
Beryllium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Cadmium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Calcium	39000 B	35000 B	45000	48000 B	NA	NA	NA	NA
Chromium	0.70 J	0.67 J	1.0 J	2.7 B	NA	NA	NA	NA
Copper	2.3	2.6	1.7 J	1.5 J	NA	NA	NA	NA
Lead	0.12 J B	0.12 J B	0.12 J	0.065 J B	NA	NA	NA	NA
Magnesium	9700 B	9400 B	11000	11000 B	NA	NA	NA	NA
Mercury	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA	NA	NA
Nickel	0.89 J	0.86 J	0.57 J	0.51 J	NA	NA	NA	NA
Potassium	5500 B	5500 B	5900	6300	NA	NA	NA	NA
Selenium	5.0 U	5.0 U	1.5 J B	0.74 J B	NA	NA	NA	NA
Silver	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Sodium	39000 B	38000 B	51000	50000 B	NA	NA	NA	NA
Thallium	0.023 J	0.020 J	0.019 J	0.079 J	NA	NA	NA	NA
Vanadium	1.4	1.7	0.58 J	1.4	NA	NA	NA	NA
Zinc	8.9 B	7.5 B	7.7	4.4 J	NA	NA	NA	NA
Miscelanous mg/L								
Alkalinity	120 B	100 B	110	130 B	NA	100 B	NA	73 B
BicarBonate Alkalinity as CaCO3	110 B	95 B	110	130 B	NA	100 B	NA	73 B
CarBonate Alkalinity as CaCO3	7.8	8.9	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U
Chloride	49	46	49	60	NA	94 B	NA	81
Nitrate as N	2.4 H	2.5	2.1	3.1	NA	4.7	NA	3.7
Sulfate	31	42	69	57	NA	17	NA	25

NA= Not Analyized
RNA= Result not available from lab at time of download.

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Volatile Organic Compounds (GC/MS) ug/L								
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DiBromoethane (EDB)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone (MEK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	3.1 J
Acrylonitrile	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon disulfide	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ChloroBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	0.42 J	0.36 J	0.29 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DiBromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
EthylBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-Butyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	0.18 J B	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	0.36 J	0.31 J	0.27 J	0.29 J	0.16 J	0.22 J	0.21 J	0.20 J
Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-7-0/1-0 8/22/2013	HD-COD-SW-7-0/2-0 8/22/2013	HD-COD-SW-7-0/1-0 9/26/2013	HD-COD-SW-7-0/1-0 11/21/2013	HD-COD-SW-7-0/1-0 1/17/2014	HD-COD-SW-7-0/1-0 1/23/2014	HD-COD-SW-7-0/1-0 2/4/2014	HD-COD-SW-7-0/1-0 2/20/2014
Metals (Total) ug/L								
Antimony	0.16 J	0.14 J	0.20 J	0.15 J	NA	NA	NA	NA
Arsenic	0.45 J	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Barium	40 B	36 B	43 B	44	NA	NA	NA	NA
Beryllium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Cadmium	0.18 J	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Calcium	37000 B	34000 B	42000	50000 B	NA	36000	NA	32000
Chromium	0.85 J	0.80 J	1.5 J	2.2	NA	NA	NA	NA
Copper	4.3	3.8	2	1.4 J	NA	NA	NA	NA
Lead	0.97 J B	0.71 J B	1.1 B	0.50 J B	NA	NA	NA	NA
Magnesium	9200 B	9200 B	10000	14000	NA	8400	NA	9300
Mercury	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA	NA	NA
Nickel	1.2	0.81 J	1	0.66 J	NA	NA	NA	NA
Potassium	6000 B	6100 B	6200	7600	NA	4800	NA	3700
Selenium	5.0 U	5.0 U	5.0 U	0.85 J	NA	NA	NA	NA
Silver	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Sodium	40000 B	40000 B	53000	55000 B	NA	33000 B	NA	39000
Thallium	0.086 J B	0.046 J B	0.055 J B	0.096 J	NA	NA	NA	NA
Vanadium	1.7	1.9	0.71 J	1.2	NA	NA	NA	NA
Zinc	8.7	13	7	4.7 J	NA	NA	NA	NA
Metals (Dissolved) ug/L								
Antimony	0.23 J B	0.14 J B	0.16 J	0.24 J	NA	NA	NA	NA
Arsenic	1.0 U	1.0 U	0.75 J B	1.0 U	NA	NA	NA	NA
Barium	39	36	41	47 B	NA	NA	NA	NA
Beryllium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Cadmium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Calcium	36000 B	34000 B	40000	55000 B	NA	NA	NA	NA
Chromium	1.1 J	1.1 J	0.79 J	2.9 B	NA	NA	NA	NA
Copper	2.4	2.9	1.5 J	1.3 J	NA	NA	NA	NA
Lead	0.16 J B	0.11 J B	0.15 J	0.078 J B	NA	NA	NA	NA
Magnesium	9300 B	9100 B	10000	15000 B	NA	NA	NA	NA
Mercury	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA	NA	NA
Nickel	0.83 J	1.1	0.70 J	0.65 J	NA	NA	NA	NA
Potassium	5900 B	6100 B	6500	8600	NA	NA	NA	NA
Selenium	5.0 U	5.0 U	1.0 J B	0.50 J B	NA	NA	NA	NA
Silver	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Sodium	40000 B	40000 B	56000	63000 B	NA	NA	NA	NA
Thallium	0.22 J	0.16 J	1.0 U	0.15 J	NA	NA	NA	NA
Vanadium	1.5	1.5	0.99 J	1	NA	NA	NA	NA
Zinc	7.0 B	9.8 B	4.0 J	3.5 J	NA	NA	NA	NA
Miscelanous mg/L								
Alkalinity	110 B	100 B	110	150 B	NA	92 B	NA	91 B
BicarBonate Alkalinity as CaCO3	110 B	100 B	110	150 B	NA	92 B	NA	91 B
CarBonate Alkalinity as CaCO3	5.0 U	0.82 J	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U
Chloride	44	42	50	64	NA	52 B	NA	76
Nitrate as N	2.5 H	2.5	2.2	2.7	NA	4.7	NA	3.8
Sulfate	47	47	64	63	NA	56	NA	27

NA= Not Analyized
RNA= Result not available from lab at time of download.

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-8-0/1-0 8/22/2013	HD-COD-SW-8-0/2-0 8/22/2013	HD-COD-SW-8-0/1-0 9/26/2013	HD-COD-SW-8-0/1-0 11/21/2013	HD-COD-SW-8-0/1-0 1/17/2014	HD-COD-SW-8-0/1-0 1/23/2014	HD-COD-SW-8-0/1-0 2/4/2014	HD-COD-SW-8-0/1-0 2/20/2014
Volatile Organic Compounds (GC/MS) ug/L								
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DiBromoethane (EDB)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone (MEK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acrylonitrile	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon disulfide	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ChloroBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	0.30 J	0.32 J	0.25 J	0.32 J	0.27 J	0.41 J	0.32 J	0.29 J
cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DiBromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
EthylBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-Butyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	1.0 U	1.0 U	1.0 U	0.15 J	0.77 J	1.2	0.91 J	0.71 J
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	0.38 J	0.41 J	0.36 J	0.42 J	0.47 J	0.67 J	0.52 J	0.45 J
Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-8-0/1-0 8/22/2013	HD-COD-SW-8-0/2-0 8/22/2013	HD-COD-SW-8-0/1-0 9/26/2013	HD-COD-SW-8-0/1-0 11/21/2013	HD-COD-SW-8-0/1-0 1/17/2014	HD-COD-SW-8-0/1-0 1/23/2014	HD-COD-SW-8-0/1-0 2/4/2014	HD-COD-SW-8-0/1-0 2/20/2014
Metals (Total) ug/L								
Antimony	0.23 J	0.22 J	0.17 J	0.082 J	NA	NA	NA	NA
Arsenic	0.43 J	1.0 U	0.52 J	1.0 U	NA	NA	NA	NA
Barium	40 B	36 B	43 B	44	NA	NA	NA	NA
Beryllium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Cadmium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Calcium	38000 B	37000 B	43000	46000 B	NA	34000	NA	28000
Chromium	1.3 J	1.0 J	1.3 J	2.5	NA	NA	NA	NA
Copper	3.6	3.4	1.9 J	1.7 J	NA	NA	NA	NA
Lead	0.91 J B	0.55 J B	0.95 J B	0.62 J B	NA	NA	NA	NA
Magnesium	9900 B	9900 B	11000	11000	NA	7300	NA	7500
Mercury	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA	NA	NA
Nickel	0.97 J	0.89 J	0.72 J	0.74 J	NA	NA	NA	NA
Potassium	5800 B	6000 B	6500	7900	NA	4800	NA	3600
Selenium	5.0 U	5.0 U	1.3 J B	0.64 J	NA	NA	NA	NA
Silver	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Sodium	39000 B	40000 B	55000	58000 B	NA	34000 B	NA	48000
Thallium	0.22 J B	0.088 J B	0.037 J B	0.042 J	NA	NA	NA	NA
Vanadium	1.3	1.7	0.65 J	0.49 J	NA	NA	NA	NA
Zinc	7.4	8.6	4.8 J	4.6 J	NA	NA	NA	NA
Metals (Dissolved) ug/L								
Antimony	0.14 J B	0.18 J B	0.17 J	0.18 J	NA	NA	NA	NA
Arsenic	1.0 U	1.0 U	0.31 J B	1.0 U	NA	NA	NA	NA
Barium	39	36	44	45 B	NA	NA	NA	NA
Beryllium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Cadmium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Calcium	38000 B	36000 B	45000	49000 B	NA	NA	NA	NA
Chromium	1.1 J	1.1 J	1.0 J	2.9 B	NA	NA	NA	NA
Copper	2.1	2.3	2.3	1.3 J	NA	NA	NA	NA
Lead	0.067 J B	0.071 J B	0.14 J	0.098 J B	NA	NA	NA	NA
Magnesium	10000 B	9800 B	12000	12000 B	NA	NA	NA	NA
Mercury	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA	NA	NA
Nickel	0.86 J	0.83 J	0.86 J	0.70 J	NA	NA	NA	NA
Potassium	5800 B	5900 B	6600	8400	NA	NA	NA	NA
Selenium	5.0 U	5.0 U	1.2 J B	5.0 U	NA	NA	NA	NA
Silver	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Sodium	40000 B	39000 B	56000	62000 B	NA	NA	NA	NA
Thallium	0.083 J	0.083 J	1.0 U	0.083 J	NA	NA	NA	NA
Vanadium	1.4	1.9	0.78 J	1	NA	NA	NA	NA
Zinc	8.4 B	9.5 B	7	5.8	NA	NA	NA	NA
Miscelanous mg/L								
Alkalinity	110 B	110 B	120	130 B	NA	82 B	NA	71 B
BicarBonate Alkalinity as CaCO3	110 B	100 B	120	130 B	NA	82 B	NA	71 B
CarBonate Alkalinity as CaCO3	5.0 U	2.9 J	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U
Chloride	46	46	54	60	NA	50	NA	95
Nitrate as N	2.5 H	2.5	2.1	2.8	NA	4.8	NA	3.9
Sulfate	46	45	67	62	NA	52	NA	25

NA= Not Analyized
RNA= Result not available from lab at time of download.

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-9-0/1-0 8/22/2013	HD-COD-SW-9-0/2-0 8/22/2013	HD-COD-SW-9-0/1-0 9/26/2013	HD-COD-SW-9-0/1-0 11/21/2013	HD-COD-SW-9-0/1-0 1/17/2014	HD-COD-SW-9-0/0-0 1/27/2014	HD-COD-SW-9-0/1-0 2/4/2014	HD-COD-SW-9-0/1-0 2/20/2014
Volatile Organic Compounds (GC/MS) ug/L								
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DiBromoethane (EDB)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	0.14 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone (MEK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	5.0 U	2.7 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acrylonitrile	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon disulfide	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ChloroBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	0.25 J	0.30 J	0.24 J	0.24 J	0.28 J	0.29 J	0.25 J	0.30 J
cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DiBromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
EthylBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-Butyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	0.19 J	0.15 J	0.15 J	1.0 U
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	0.34 J	0.27 J	0.24 J	0.24 J	0.32 J	0.39 J	0.31 J	0.28 J
Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-9-0/1-0 8/22/2013	HD-COD-SW-9-0/2-0 8/22/2013	HD-COD-SW-9-0/1-0 9/26/2013	HD-COD-SW-9-0/1-0 11/21/2013	HD-COD-SW-9-0/1-0 1/17/2014	HD-COD-SW-9-0/0-0 1/27/2014	HD-COD-SW-9-0/1-0 2/4/2014	HD-COD-SW-9-0/1-0 2/20/2014
Metals (Total) ug/L								
Antimony	0.18 J	0.22 J	0.25 J	0.19 J	NA	NA	NA	NA
Arsenic	1.0 U	0.46 J	1.0 U	1.0 U	NA	NA	NA	NA
Barium	39 B	33 B	39 B	38	NA	NA	NA	NA
Beryllium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Cadmium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Calcium	40000 B	42000 B	49000	50000 B	NA	40000	NA	44000
Chromium	1.1 J	1.0 J	1.4 J	2	NA	NA	NA	NA
Copper	3.2	3	2	1.7 J	NA	NA	NA	NA
Lead	0.68 J B	0.45 J B	1.2 B	0.62 J B	NA	NA	NA	NA
Magnesium	11000 B	11000 B	12000	12000	NA	8700	NA	11000
Mercury	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA	NA	NA
Nickel	1.2	1.2	0.86 J	0.86 J	NA	NA	NA	NA
Potassium	7300 B	9100 B	9900	11000	NA	6500	NA	5900
Selenium	5.0 U	5.0 U	1.7 J B	0.90 J	NA	NA	NA	NA
Silver	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Sodium	44000 B	49000 B	65000	63000 B	NA	33000	NA	72000
Thallium	0.089 J B	0.049 J B	0.019 J B	0.025 J	NA	NA	NA	NA
Vanadium	1.5	2	1.1	0.77 J	NA	NA	NA	NA
Zinc	12	13	13	14	NA	NA	NA	NA
Metals (Dissolved) ug/L								
Antimony	0.17 J B	0.19 J B	0.26 J	0.30 J	NA	NA	NA	NA
Arsenic	0.43 J	1.0 U	0.38 J B	1.0 U	NA	NA	NA	NA
Barium	38	32	36	40 B	NA	NA	NA	NA
Beryllium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Cadmium	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Calcium	40000 B	42000 B	51000	55000 B	NA	NA	NA	NA
Chromium	1.1 J	1.2 J	1.2 J	2.8 B	NA	NA	NA	NA
Copper	2.2	2.8	1.7 J	1.7 J	NA	NA	NA	NA
Lead	0.13 J B	0.19 J B	0.57 J	0.43 J B	NA	NA	NA	NA
Magnesium	11000 B	11000 B	12000	13000 B	NA	NA	NA	NA
Mercury	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA	NA	NA
Nickel	1	1.1	0.79 J	0.98 J	NA	NA	NA	NA
Potassium	7500 B	9300 B	10000	12000	NA	NA	NA	NA
Selenium	5.0 U	5.0 U	1.2 J B	0.54 J B	NA	NA	NA	NA
Silver	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Sodium	45000 B	48000 B	65000	69000 B	NA	NA	NA	NA
Thallium	0.046 J	0.052 J	1.0 U	0.053 J	NA	NA	NA	NA
Vanadium	1	1.7	0.73 J	1.2	NA	NA	NA	NA
Zinc	8.1 B	14 B	14	14	NA	NA	NA	NA
Miscelanous mg/L								
Alkalinity	120 B	120 B	130	150 B	NA	120 B	NA	110 B
BicarBonate Alkalinity as CaCO3	120 B	120 B	130	150 B	NA	120 B	NA	110 B
CarBonate Alkalinity as CaCO3	5.0 U	0.66 J	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U
Chloride	53	61	74	74	NA	66	NA	140
Nitrate as N	2.6 H	2.8	2.5	3.3	NA	4.1	NA	3.5
Sulfate	48	47	70	64	NA	30	NA	29

NA= Not Analyized
RNA= Result not available from lab at time of download.

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-10-0/1-0 8/22/2013	HD-COD-SW-10-0/1-0 1/23/2014	HD-COD-SW-10-0/1-0 2/4/2014	HD-COD-SW-10-0/1-0 2/20/2014	HD-COD-SW-11-0/1-0 8/22/2013	HD-COD-SW-11-0/1-0 9/26/2013	HD-COD-SW-11-0/1-0 11/21/2013	HD-COD-SW-11-0/1-0 1/24/2014	HD-COD-SW-11-0/1-0 2/20/2014
Volatile Organic Compounds (GC/MS) ug/L									
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DiBromoethane (EDB)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone (MEK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	5.0 U	3.4 J	5.0 U	4.2 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acrylonitrile	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon disulfide	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ChloroBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	0.45 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DiBromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
EthylBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-Butyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	1.0 U	0.36 J	1.0 U	0.21 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	1.0 U	0.25 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-10-0/1-0 8/22/2013	HD-COD-SW-10-0/1-0 1/23/2014	HD-COD-SW-10-0/1-0 2/4/2014	HD-COD-SW-10-0/1-0 2/20/2014	HD-COD-SW-11-0/1-0 8/22/2013	HD-COD-SW-11-0/1-0 9/26/2013	HD-COD-SW-11-0/1-0 11/21/2013	HD-COD-SW-11-0/1-0 1/24/2014	HD-COD-SW-11-0/1-0 2/20/2014
Metals (Total) ug/L									
Antimony	0.079 J	NA	NA	NA	0.050 J	0.085 J	2.0 U	NA	NA
Arsenic	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Barium	60 B	NA	NA	NA	31 B	33 B	28	NA	NA
Beryllium	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Cadmium	0.15 J	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Calcium	93000 B	33000	NA	40000	69000 B	73000	73000 B	74000	66000
Chromium	8.1	NA	NA	NA	2.9	2.5	4.5	NA	NA
Copper	1.9 J	NA	NA	NA	3.2	1.2 J	1.2 J	NA	NA
Lead	0.11 J B	NA	NA	NA	0.30 J B	0.19 J B	0.13 J B	NA	NA
Magnesium	19000 B	6000	NA	8000	18000 B	20000	19000	15000	17000
Mercury	0.20 U	NA	NA	NA	0.20 U	0.20 U	0.20 U	NA	NA
Nickel	1.5	NA	NA	NA	0.78 J	1.0 U	1.0 U	NA	NA
Potassium	10000 B	3200	NA	4000	2100 B	2200	2200	2000	2300
Selenium	5.0 U	NA	NA	NA	5.0 U	1.8 J B	5.0 U	NA	NA
Silver	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Sodium	65000 B	27000 B	NA	140000	21000 B	22000	19000 B	24000 B	73000
Thallium	0.047 J B	NA	NA	NA	0.027 J B	0.017 J B	0.017 J	NA	NA
Vanadium	0.19 J	NA	NA	NA	0.63 J	0.29 J	1.0 U	NA	NA
Zinc	8.6	NA	NA	NA	9.1	13	4.6 J	NA	NA
Metals (Dissolved) ug/L									
Antimony	0.054 J B	NA	NA	NA	0.055 J B	0.073 J	0.051 J	NA	NA
Arsenic	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Barium	60	NA	NA	NA	31	32	30 B	NA	NA
Beryllium	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Cadmium	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Calcium	93000 B	NA	NA	NA	69000 B	75000	82000 B	NA	NA
Chromium	8	NA	NA	NA	3.1	2.2	5.4 B	NA	NA
Copper	1.4 J	NA	NA	NA	1.9 J	1.9 J	1.2 J	NA	NA
Lead	0.022 J B	NA	NA	NA	1.0 U	0.071 J	0.031 J B	NA	NA
Magnesium	19000 B	NA	NA	NA	18000 B	20000	21000 B	NA	NA
Mercury	0.20 U	NA	NA	NA	0.20 U	0.20 U	0.20 U	NA	NA
Nickel	1.2	NA	NA	NA	0.74 J	1.0 U	1.0 U	NA	NA
Potassium	10000 B	NA	NA	NA	2100 B	2300	2400	NA	NA
Selenium	5.0 U	NA	NA	NA	5.0 U	0.63 J B	5.0 U	NA	NA
Silver	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Sodium	66000 B	NA	NA	NA	21000 B	23000	21000 B	NA	NA
Thallium	0.035 J	NA	NA	NA	0.030 J	1.0 U	0.044 J	NA	NA
Vanadium	0.38 J	NA	NA	NA	0.70 J	1.0 U	1.0 U	NA	NA
Zinc	5.9 B	NA	NA	NA	7.9 B	8.5	4.0 J	NA	NA
Miscelanous mg/L									
Alkalinity	210 B	88 B	NA	91 B	210 B	210	220 B	220 B	180 B
BicarBonate Alkalinity as CaCO3	200 B	88 B	NA	91 B	200 B	210	220 B	220 B	180 B
CarBonate Alkalinity as CaCO3	8.6	5.0 U	NA	5.0 U	8.7	5.0 U	5.0 U	5.0 U	5.0 U
Chloride	140	66	NA	300	39	38	37	65 B	170
Nitrate as N	3.2 H	3.2	NA	1.7	3.9	3.4	4.4	5.1	3.7
Sulfate	27	11	NA	16	19	19	18	19	20

NA= Not Analyized
RNA= Result not available from lab at time of download.

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-12-0/1-0 8/22/2013	HD-COD-SW-12-0/1-0 1/24/2014	HD-COD-SW-12-0/1-0 2/20/2014	HD-COD-SW-13-0/1-0 8/22/2013	HD-COD-SW-13-0/1-0 1/23/2014	HD-COD-SW-13-0/1-0 2/4/2014	HD-COD-SW-13-0/1-0 2/20/2014
Volatile Organic Compounds (GC/MS) ug/L							
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DiBromoethane (EDB)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone (MEK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	5.0 U	5.0 U	5.0 U	2.5 J	5.0 U	5.0 U	5.0 U
Acrylonitrile	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon disulfide	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ChloroBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.0 U	0.20 J	0.27 J	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	0.59 J	0.63 J	0.51 J	0.39 J
cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DiBromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
EthylBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-Butyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	0.22 J B	1.0 U	1.0 U	0.23 J B	1.0 U	1.0 U	1.0 U
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	1.0 U	1.0 U	1.0 U	0.30 J	1.9	1.4	1.1
Toluene	1.0 U	1.0 U	0.16 J	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	1.0 U	1.0 U	0.16 J	0.82 J	1.2	0.93 J	0.72 J
Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-12-0/1-0 8/22/2013	HD-COD-SW-12-0/1-0 1/24/2014	HD-COD-SW-12-0/1-0 2/20/2014	HD-COD-SW-13-0/1-0 8/22/2013	HD-COD-SW-13-0/1-0 1/23/2014	HD-COD-SW-13-0/1-0 2/4/2014	HD-COD-SW-13-0/1-0 2/20/2014
Metals (Total) ug/L							
Antimony	0.41 J	NA	NA	0.14 J	NA	NA	NA
Arsenic	1.0 U	NA	NA	0.66 J	NA	NA	NA
Barium	19 B	NA	NA	49 B	NA	NA	NA
Beryllium	1.0 U	NA	NA	0.044 J	NA	NA	NA
Cadmium	1.0 U	NA	NA	0.47 J	NA	NA	NA
Calcium	59000 B	65000	66000	52000 B	34000	NA	28000
Chromium	0.95 J	NA	NA	3.7	NA	NA	NA
Copper	3.2	NA	NA	7.9	NA	NA	NA
Lead	0.78 J B	NA	NA	4.4 B	NA	NA	NA
Magnesium	13000 B	11000	13000	13000 B	7300	NA	7400
Mercury	0.20 U	NA	NA	0.20 U	NA	NA	NA
Nickel	2.3	NA	NA	1.9	NA	NA	NA
Potassium	23000 B	18000	13000	6900 B	4600	NA	3500
Selenium	5.0 U	NA	NA	5.0 U	NA	NA	NA
Silver	1.0 U	NA	NA	1.0 U	NA	NA	NA
Sodium	86000 B	85000 B	150000	47000 B	32000 B	NA	50000
Thallium	0.024 J B	NA	NA	0.020 J B	NA	NA	NA
Vanadium	0.80 J	NA	NA	1.2	NA	NA	NA
Zinc	29	NA	NA	56	NA	NA	NA
Metals (Dissolved) ug/L							
Antimony	0.61 J B	NA	NA	0.19 J B	NA	NA	NA
Arsenic	0.58 J	NA	NA	1.0 U	NA	NA	NA
Barium	20	NA	NA	43	NA	NA	NA
Beryllium	1.0 U	NA	NA	1.0 U	NA	NA	NA
Cadmium	1.0 U	NA	NA	1.0 U	NA	NA	NA
Calcium	58000 B	NA	NA	49000 B	NA	NA	NA
Chromium	0.97 J	NA	NA	2.3	NA	NA	NA
Copper	2.6	NA	NA	3.3	NA	NA	NA
Lead	0.95 J B	NA	NA	0.32 J B	NA	NA	NA
Magnesium	13000 B	NA	NA	12000 B	NA	NA	NA
Mercury	0.20 U	NA	NA	0.20 U	NA	NA	NA
Nickel	2.1	NA	NA	0.86 J	NA	NA	NA
Potassium	22000 B	NA	NA	6500 B	NA	NA	NA
Selenium	5.0 U	NA	NA	5.0 U	NA	NA	NA
Silver	1.0 U	NA	NA	1.0 U	NA	NA	NA
Sodium	85000 B	NA	NA	44000 B	NA	NA	NA
Thallium	0.019 J	NA	NA	0.019 J	NA	NA	NA
Vanadium	0.21 J	NA	NA	0.21 J	NA	NA	NA
Zinc	33 B	NA	NA	17 B	NA	NA	NA
Miscelanous mg/L							
Alkalinity	170 B	200 B	160 B	130 B	86 B	NA	73 B
BicarBonate Alkalinity as CaCO3	170 B	200 B	160 B	130 B	86 B	NA	73 B
CarBonate Alkalinity as CaCO3	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	5.0 U
Chloride	110	150 B	310	63	52	NA	96
Nitrate as N	2.9	3	2.2	2.5 H	4.7	NA	3.6
Sulfate	44	42	41	38	50	NA	23

NA= Not Analyized
RNA= Result not available from lab at time of download.

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-15-0/1-0 8/22/2013	HD-COD-SW-15-0/1-0 9/26/2013	HD-COD-SW-15-0/1-0 11/21/2013	HD-COD-SW-15-0/1-0 1/17/2014	HD-COD-SW-15-0/1-0 1/24/2014	HD-COD-SW-15-0/1-0 2/4/2014	HD-COD-SW-15-0/1-0 2/20/2014
Volatile Organic Compounds (GC/MS) ug/L							
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	0.56 J	1.0 U	0.55 J	1.0 U
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	0.16 J	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	0.59 J	0.52 J	0.50 J	0.34 J
1,2-DiBromoethane (EDB)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone (MEK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acrylonitrile	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon disulfide	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ChloroBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	0.21 J B	0.26 J B	1.0 U	0.24 J	0.29 J	0.23 J	1.0 U
Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	2.1	1.2	0.94 J	15	13	12	6.8
cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DiBromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
EthylBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-Butyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	0.29 J B	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	3.2	3.8	2.9	5.5	6.4	6.1	3.1
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	3.7	2.5	1.9	12	12	10	5.8
Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-15-0/1-0 8/22/2013	HD-COD-SW-15-0/1-0 9/26/2013	HD-COD-SW-15-0/1-0 11/21/2013	HD-COD-SW-15-0/1-0 1/17/2014	HD-COD-SW-15-0/1-0 1/24/2014	HD-COD-SW-15-0/1-0 2/4/2014	HD-COD-SW-15-0/1-0 2/20/2014
Metals (Total) ug/L							
Antimony	0.17 J	0.10 J	2.0 U	NA	NA	NA	NA
Arsenic	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Barium	39 B	36 B	36	NA	NA	NA	NA
Beryllium	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Cadmium	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Calcium	84000 B	82000	82000 B	NA	90000	NA	54000
Chromium	6.6	6.7	7.8	NA	NA	NA	NA
Copper	2	0.45 J	0.47 J	NA	NA	NA	NA
Lead	0.23 J B	0.044 J B	0.023 J B	NA	NA	NA	NA
Magnesium	19000 B	19000	18000	NA	16000	NA	13000
Mercury	0.20 U	0.20 U	0.20 U	NA	NA	NA	NA
Nickel	1.1	0.41 J	0.27 J	NA	NA	NA	NA
Potassium	5500 B	5000	5100	NA	5300	NA	4700
Selenium	5.0 U	1.1 J B	0.68 J	NA	NA	NA	NA
Silver	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Sodium	44000 B	40000	36000 B	NA	45000 B	NA	47000
Thallium	0.19 J B	0.016 J B	0.020 J	NA	NA	NA	NA
Vanadium	1.0 U	0.097 J	1.0 U	NA	NA	NA	NA
Zinc	5.7	2.8 J	3.7 J	NA	NA	NA	NA
Metals (Dissolved) ug/L							
Antimony	0.11 J B	0.11 J	0.14 J	NA	NA	NA	NA
Arsenic	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Barium	39	37	39 B	NA	NA	NA	NA
Beryllium	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Cadmium	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Calcium	83000 B	84000	91000 B	NA	NA	NA	NA
Chromium	6.4	6.6	8.7 B	NA	NA	NA	NA
Copper	1.8 J	1.3 J	1.6 J	NA	NA	NA	NA
Lead	0.079 J B	0.043 J	0.019 J B	NA	NA	NA	NA
Magnesium	19000 B	19000	20000 B	NA	NA	NA	NA
Mercury	0.20 U	0.20 U	0.20 U	NA	NA	NA	NA
Nickel	1.1	1.0 U	0.33 J	NA	NA	NA	NA
Potassium	5400 B	5200	5700	NA	NA	NA	NA
Selenium	5.0 U	1.5 J B	1.0 J B	NA	NA	NA	NA
Silver	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Sodium	44000 B	40000	40000 B	NA	NA	NA	NA
Thallium	0.017 J	1.0 U	0.028 J	NA	NA	NA	NA
Vanadium	1.0 U	1.0 U	1.0 U	NA	NA	NA	NA
Zinc	9.2 B	8.9	4.8 J	NA	NA	NA	NA
Miscelanous mg/L							
Alkalinity	220 B	220	230 B	NA	230 B	NA	150 B
BicarBonate Alkalinity as CaCO3	220 B	220	230 B	NA	230 B	NA	150 B
CarBonate Alkalinity as CaCO3	5.0 U	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U
Chloride	82	74	72	NA	100 B	NA	100
Nitrate as N	3.6	3.4	3.6	NA	4.1	NA	3.8
Sulfate	37	38	39	NA	36	NA	31

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-16-0/1-0 8/22/2013	HD-COD-SW-16-0/1-0 1/23/2014	HD-COD-SW-16-0/1-0 2/4/2014	HD-COD-SW-16-0/1-0 2/20/2014	HD-COD-SW-17-0/1-0 8/22/2013	HD-COD-SW-17-0/1-0 9/26/2013	HD-COD-SW-17-0/1-0 11/21/2013	HD-COD-SW-17-0/1-0 1/17/2014	HD-COD-SW-17-0/1-0 1/30/2014
Volatile Organic Compounds (GC/MS) ug/L									
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	2.5	1.0 U	0.90 J	6.7	24 J
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0.59 J	0.45 J	1.0 U	0.61 J	25 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	0.60 J	0.57 J	1.0 U	5.0 U	25 U
1,2-DiBromoethane (EDB)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
1,4-Dioxane	200 U	200 U	200 U	200 U	200 U	200 U	200 U	1000 U	5000 U
2-Butanone (MEK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	25 U	130 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	25 U	130 U
4-Methyl-2-pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	25 U	130 U
Acetone	3.4 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	25 U	130 U
Acrylonitrile	20 U	20 U	20 U	20 U	20 U	20 U	20 U	100 U	500 U
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
Bromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
CarBon disulfide	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
CarBon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
ChloroBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	0.29 J B	0.26 J B	1.0 U	5.0 U	25 U
Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
cis-1,2-Dichloroethene	0.36 J	0.53 J	0.46 J	0.40 J	7.9	6.9	4.1	10	37
cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
DiBromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
EthylBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
Methyl tert-Butyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
Methylene Chloride	0.21 J B	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 J	25 U
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
Tetrachloroethene	1.0 U	3.2	2.1	2	45	34	19	100	370
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
Trichloroethene	0.28 J	1	0.81 J	0.70 J	20	20	13	30	100
Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	25 U
Xylenes, Total	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	15 U	75 U

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-16-0/1-0 8/22/2013	HD-COD-SW-16-0/1-0 1/23/2014	HD-COD-SW-16-0/1-0 2/4/2014	HD-COD-SW-16-0/1-0 2/20/2014	HD-COD-SW-17-0/1-0 8/22/2013	HD-COD-SW-17-0/1-0 9/26/2013	HD-COD-SW-17-0/1-0 11/21/2013	HD-COD-SW-17-0/1-0 1/17/2014	HD-COD-SW-17-0/1-0 1/30/2014
Metals (Total) ug/L									
Antimony	0.19 J	NA	NA	NA	0.13 J	0.089 J	2.0 U	NA	NA
Arsenic	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Barium	37 B	NA	NA	NA	47 B	43 B	40	NA	NA
Beryllium	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Cadmium	1.0 U	NA	NA	NA	0.12 J	1.0 U	1.0 U	NA	NA
Calcium	36000 B	35000	NA	28000	92000 B	90000	87000 B	NA	94000 B
Chromium	0.80 J	NA	NA	NA	3.9	4.2	5.6	NA	NA
Copper	2.6	NA	NA	NA	3.6	1.9 J	1.2 J	NA	NA
Lead	0.38 J B	NA	NA	NA	1.9 B	2.1 B	0.94 J B	NA	NA
Magnesium	9900 B	7600	NA	7600	20000 B	20000	19000	NA	20000
Mercury	0.20 U	NA	NA	NA	0.20 U	0.20 U	0.20 U	NA	NA
Nickel	0.98 J	NA	NA	NA	1.6	0.32 J	0.62 J	NA	NA
Potassium	6000 B	4500	NA	3600	5200 B	5100	5100	NA	5500
Selenium	5.0 U	NA	NA	NA	5.0 U	1.7 J B	0.70 J	NA	NA
Silver	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Sodium	40000 B	35000 B	NA	50000	41000 B	40000	37000 B	NA	52000 B
Thallium	0.094 J B	NA	NA	NA	0.082 J B	0.024 J B	0.027 J	NA	NA
Vanadium	1.9	NA	NA	NA	0.39 J	0.20 J	0.26 J	NA	NA
Zinc	4.9 J	NA	NA	NA	11	7.4	5.8	NA	NA
Metals (Dissolved) ug/L									
Antimony	0.12 J B	NA	NA	NA	0.10 J B	0.081 J	0.080 J	NA	NA
Arsenic	1.0 U	NA	NA	NA	0.36 J	0.37 J B	1.0 U	NA	NA
Barium	36	NA	NA	NA	47	41	41 B	NA	NA
Beryllium	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Cadmium	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Calcium	36000 B	NA	NA	NA	93000 B	90000	93000 B	NA	NA
Chromium	0.86 J	NA	NA	NA	3.1	3.5	5.7 B	NA	NA
Copper	2.2	NA	NA	NA	1.6 J	1.4 J	0.59 J	NA	NA
Lead	0.067 J B	NA	NA	NA	1.0 U	0.050 J	0.028 J B	NA	NA
Magnesium	9800 B	NA	NA	NA	21000 B	20000	20000 B	NA	NA
Mercury	0.20 U	NA	NA	NA	0.20 U	0.20 U	0.20 U	NA	NA
Nickel	0.89 J	NA	NA	NA	1.1	0.27 J	0.49 J	NA	NA
Potassium	6000 B	NA	NA	NA	5200 B	5200	5500	NA	NA
Selenium	5.0 U	NA	NA	NA	1.0 J	1.9 J B	1.2 J B	NA	NA
Silver	1.0 U	NA	NA	NA	1.0 U	1.0 U	1.0 U	NA	NA
Sodium	40000 B	NA	NA	NA	41000 B	40000	40000 B	NA	NA
Thallium	1.0 U	NA	NA	NA	0.017 J	1.0 U	0.027 J	NA	NA
Vanadium	1.3	NA	NA	NA	1.0 U	0.29 J	1.0 U	NA	NA
Zinc	6.4 B	NA	NA	NA	6.6 B	5.9	3.1 J	NA	NA
Miscelanous mg/L									
Alkalinity	110 B	86 B	NA	81 B	240 B	240	230 B	NA	240 B
BicarBonate Alkalinity as CaCO3	100 B	86 B	NA	81 B	240 B	240	230 B	NA	240 B
CarBonate Alkalinity as CaCO3	1.3 J	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	NA	5.0 U
Chloride	44	54 B	NA	98	74	73	72	NA	110 B
Nitrate as N	2.5	4.6	NA	3.7	3.3	3.2	3.4	NA	3.8
Sulfate	45	49	NA	24	34	38	38	NA	36

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-17-0/1-0 2/4/14 9:35	HD-COD-SW-17-0/1-0 2/4/14 11:15	HD-COD-SW-17-0/1-0 2/20/2014	HD-COD-SW-18-0/1-0 8/22/2013	HD-COD-SW-19-0/1-0 9/26/2013	HD-COD-SW-19-0/1-0 11/21/2013	HD-COD-SW-20-0/1-0 9/26/2013	HD-COD-SW-20-0/1-0 11/21/2013	HD-COD-SW-20-0/1-0 1/23/2014	HD-COD-SW-20-0/1-0 2/20/2014
Volatile Organic Compounds (GC/MS) ug/L										
1,1,1,2-Tetrachloroethane	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	24	4.6 J	20	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	2.5	5.0 U	2.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.3 J	5.0 U	3.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DiBromoethane (EDB)	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	400 U	1000 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone (MEK)	10 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	10 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	10 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	10 U	25 U	5.0 U	2.8 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acrylonitrile	40 U	100 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon disulfide	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon tetrachloride	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ChloroBenzene	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	2.0 U	5.0 U	0.25 J	1.0 U	0.23 J B	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	34	9.1	45	0.40 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DiBromochloromethane	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
EthylBenzene	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-Butyl ether	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	2.0 U	5.0 U	1.0 U	0.26 J B	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	300	76	200	0.30 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	2.7	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	81	18	60	0.46 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2.0 U	5.0 U	0.44 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total	6.0 U	15 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-17-0/1-0 2/4/14 9:35	HD-COD-SW-17-0/1-0 2/4/14 11:15	HD-COD-SW-17-0/1-0 2/20/2014	HD-COD-SW-18-0/1-0 8/22/2013	HD-COD-SW-19-0/1-0 9/26/2013	HD-COD-SW-19-0/1-0 11/21/2013	HD-COD-SW-20-0/1-0 9/26/2013	HD-COD-SW-20-0/1-0 11/21/2013	HD-COD-SW-20-0/1-0 1/23/2014	HD-COD-SW-20-0/1-0 2/20/2014
Metals (Total) ug/L										
Antimony	NA	NA	NA	0.17 J	0.064 J	2.0 U	0.21 J	0.033 J	NA	NA
Arsenic	NA	NA	NA	0.40 J	0.71 J	1.0 U	1.0 U	1.0 U	NA	NA
Barium	NA	NA	NA	40 B	31 B	28	41 B	36	NA	NA
Beryllium	NA	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Cadmium	NA	NA	NA	0.12 J	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Calcium	NA	NA	76000	42000 B	74000	74000 B	52000	49000 B	44000	41000
Chromium	NA	NA	NA	0.98 J	2.6	4.5	1.1 J	2.1	NA	NA
Copper	NA	NA	NA	5	1.2 J	1.3 J	1.6 J	1.6 J	NA	NA
Lead	NA	NA	NA	4.0 B	0.21 J B	0.080 J B	0.069 J B	0.065 J B	NA	NA
Magnesium	NA	NA	17000	11000 B	20000	20000	12000	11000	8600	9300
Mercury	NA	NA	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA
Nickel	NA	NA	NA	1	1.0 U	1.0 U	1.0 U	0.21 J	NA	NA
Potassium	NA	NA	5200	5300 B	2200	2100	2900	2700	2300	3100
Selenium	NA	NA	NA	5.0 U	1.2 J B	5.0 U	0.90 J B	5.0 U	NA	NA
Silver	NA	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Sodium	NA	NA	65000	39000 B	22000	19000 B	30000	27000 B	40000 B	110000
Thallium	NA	NA	NA	0.043 J B	1.0 U	0.11 J	1.0 U	0.066 J	NA	NA
Vanadium	NA	NA	NA	1.4	0.71 J	0.87 J	1.0 U	0.31 J	NA	NA
Zinc	NA	NA	NA	20	5	3.2 J	4.6 J	4.8 J	NA	NA
Metals (Dissolved) ug/L										
Antimony	NA	NA	NA	0.16 J B	0.068 J	0.034 J	0.22 J	0.14 J	NA	NA
Arsenic	NA	NA	NA	0.38 J	0.29 J B	1.0 U	1.0 U	1.0 U	NA	NA
Barium	NA	NA	NA	39	30	29 B	41	37 B	NA	NA
Beryllium	NA	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Cadmium	NA	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Calcium	NA	NA	NA	41000 B	72000	80000 B	53000	53000 B	NA	NA
Chromium	NA	NA	NA	0.97 J	2.3	5.3 B	0.98 J	2.8 B	NA	NA
Copper	NA	NA	NA	3.1	1.7 J	1.9 J	1.7 J	18	NA	NA
Lead	NA	NA	NA	0.15 J B	0.068 J	0.025 J B	0.14 J	0.021 J B	NA	NA
Magnesium	NA	NA	NA	11000 B	19000	21000 B	12000	12000 B	NA	NA
Mercury	NA	NA	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA
Nickel	NA	NA	NA	0.82 J	1.0 U	0.18 J	1.0 U	0.32 J	NA	NA
Potassium	NA	NA	NA	5300 B	2200	2300	2900	2900	NA	NA
Selenium	NA	NA	NA	5.0 U	0.96 J B	0.60 J B	0.83 J B	5.0 U	NA	NA
Silver	NA	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Sodium	NA	NA	NA	39000 B	22000	20000 B	31000	30000 B	NA	NA
Thallium	NA	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Vanadium	NA	NA	NA	1	0.24 J	1.0 U	1.0 U	1.0 U	NA	NA
Zinc	NA	NA	NA	12 B	14	3.9 J	4.7 J	5.5	NA	NA
Miscelanous mg/L										
Alkalinity	NA	NA	210 B	120 B	220	220 B	130	120 B	96 B	91 B
BicarBonate Alkalinity as CaCO3	NA	NA	210 B	120 B	220	220 B	130	120 B	96 B	91 B
CarBonate Alkalinity as CaCO3	NA	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloride	NA	NA	150	50	41	39	58	57	95 B	240
Nitrate as N	NA	NA	2.9	2.4	3.7	4.7	2.5	3.4	4.9	3
Sulfate	NA	NA	32	38	21	20	16	17	17	17

Codorus Creek Discharges Sampling Results
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Harley-Davidson FYNOP

Analyte	HD-COD-SW-21-0/1-0 9/26/2013	HD-COD-SW-21-0/1-0 11/21/2013	HD-COD-SW-23-0/1-0 9/26/2013	HD-COD-SW-23-0/1-0 11/21/2013	HD-COD-SW-24-0/1-0 9/26/2013	HD-COD-SW-24-0/1-0 11/21/2013	HD-COD-SW-25-0/1-0 9/26/2013	HD-COD-SW-25-0/1-0 11/21/2013	HD-COD-SW-26-0/1-0 1/24/2013	HD-COD-SW-26-0/1-0 2/20/2014
Volatile Organic Compounds (GC/MS) ug/L										
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DiBromoethane (EDB)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone (MEK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	2.8 J	45	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acrylonitrile	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon disulfide	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ChloroBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.27 J	0.42 J
Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	1.0 U	1.0 U	0.30 J	1.0 U	1.0 U	1.0 U	0.47 J	0.30 J	1.0 U	1.0 U
cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DiBromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
EthylBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-Butyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5	2.3
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	1.0 U	1.0 U	0.32 J	0.27 J	0.22 J	1.0 U	0.45 J	0.37 J	0.32 J	0.38 J
Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

Codorus Creek Discharges Sampling Results
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Analyte	HD-COD-SW-21-0/1-0 9/26/2013	HD-COD-SW-21-0/1-0 11/21/2013	HD-COD-SW-23-0/1-0 9/26/2013	HD-COD-SW-23-0/1-0 11/21/2013	HD-COD-SW-24-0/1-0 9/26/2013	HD-COD-SW-24-0/1-0 11/21/2013	HD-COD-SW-25-0/1-0 9/26/2013	HD-COD-SW-25-0/1-0 11/21/2013	HD-COD-SW-26-0/1-0 1/24/2013	HD-COD-SW-26-0/1-0 2/20/2014
Metals (Total) ug/L										
Antimony	0.20 J	0.027 J	0.20 J	0.14 J	0.21 J	0.23 J	0.17 J	0.035 J	NA	NA
Arsenic	0.35 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Barium	38 B	35	43 B	44	45 B	45	45 B	42	NA	NA
Beryllium	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Cadmium	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Calcium	51000	49000 B	49000	55000 B	51000	70000 B	43000	42000 B	70000	58000
Chromium	1.1 J	2.2	1.2 J	2.3	1.2 J	2.3	1.3 J	2	NA	NA
Copper	2	1.6 J	1.5 J	1.1 J	1.4 J	1.3 J	2.1	1.3 J	NA	NA
Lead	0.10 J B	0.050 J B	0.56 J B	0.24 J B	0.52 J B	0.20 J B	0.53 J B	0.13 J B	NA	NA
Magnesium	12000	11000	15000	16000	18000	24000	10000	10000	12000	12000
Mercury	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA
Nickel	1.0 U	0.27 J	0.56 J	0.53 J	0.47 J	0.35 J	0.88 J	0.77 J	NA	NA
Potassium	2900	2700	6100	7400	5900	6000	7400	8500	3600	3600
Selenium	1.3 J B	5.0 U	1.1 J B	1.2 J	1.6 J B	1.9 J	0.51 J B	5.0 U	NA	NA
Silver	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Sodium	31000	28000 B	55000	54000 B	55000	43000 B	69000	60000 B	44000 B	52000
Thallium	1.0 U	0.035 J	1.0 U	0.030 J	1.0 U	0.026 J	1.0 U	0.023 J	NA	NA
Vanadium	0.16 J	1.0 U	0.51 J	1.5	0.35 J	0.86 J	1.2	1.3	NA	NA
Zinc	3.1 J	3.6 J	5.8	3.7 J	3.8 J	5.8	5.6	3.3 J	NA	NA
Metals (Dissolved) ug/L										
Antimony	0.22 J	0.12 J	0.20 J	0.25 J	0.22 J	0.37 J	0.15 J	0.15 J	NA	NA
Arsenic	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.50 J B	1.0 U	NA	NA
Barium	37	36 B	45	46 B	45	47 B	45	45 B	NA	NA
Beryllium	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Cadmium	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Calcium	50000	53000 B	51000	60000 B	53000	76000 B	43000	46000 B	NA	NA
Chromium	0.92 J	2.5 B	1.0 J	2.8 B	0.91 J	2.7 B	0.96 J	2.7 B	NA	NA
Copper	1.4 J	1.5 J	2.1	1.1 J	2	0.86 J	2.4	1.8 J	NA	NA
Lead	0.048 J	1.0 U	0.091 J	0.048 J B	0.095 J	0.024 J B	0.10 J	0.064 J B	NA	NA
Magnesium	12000	12000 B	16000	17000 B	18000	25000 B	10000	11000 B	NA	NA
Mercury	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	NA
Nickel	0.18 J	0.31 J	0.81 J	0.52 J	0.61 J	0.30 J	1.1	0.87 J	NA	NA
Potassium	2800	2900	6300	8000	6000	6500	7600	9500	NA	NA
Selenium	0.75 J B	0.60 J B	1.3 J B	1.3 J B	0.90 J B	1.7 J B	1.2 J B	0.79 J B	NA	NA
Silver	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Sodium	30000	30000 B	57000	58000 B	54000	46000 B	69000	68000 B	NA	NA
Thallium	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Vanadium	1.0 U	1.0 U	0.48 J	0.45 J	0.94 J	1.0 U	1	0.54 J	NA	NA
Zinc	3.2 J	2.5 J	5.9	4.2 J	6.6	3.9 J	13	4.1 J	NA	NA
Miscelanous mg/L										
Alkalinity	130	120 B	120	160 B	160	190 B	110	120 B	160 B	170 B
BicarBonate Alkalinity as CaCO3	130	120 B	120	160 B	160	190 B	110	120 B	160 B	170 B
CarBonate Alkalinity as CaCO3	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloride	61	56	59	68	66	83	54	56	90 B	130
Nitrate as N	2.6	3.4	1.9	2.7	1.8	2.7	2	2.8	4.7	4.2
Sulfate	17	16	67	59	58	49	89	70	40	28

Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-27-0/-0 1/27/2013	HD-COD-SW-27-0/1-0 2/4/2014	HD-COD-SW-27-0/1-0 2/20/2014	HD-COD-SW-28-0/0-0 1/27/2013	HD-COD-SW-28-0/1-0 2/4/2014	HD-COD-SW-28-0/1-0 2/20/2014
Volatile Organic Compounds (GC/MS) ug/L						
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-DiBromoethane (EDB)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone (MEK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acrylonitrile	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon disulfide	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
CarBon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
ChloroBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	0.47 J	0.51 J	1.0 U	0.32 J	0.29 J	0.24 J
cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
DiBromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
EthylBenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-Butyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	0.26 J	0.32 J	1.0 U	0.21 J	0.19 J	1.0 U
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	0.44 J	0.53 J	0.25 J	0.32 J	0.29 J	0.31 J
Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

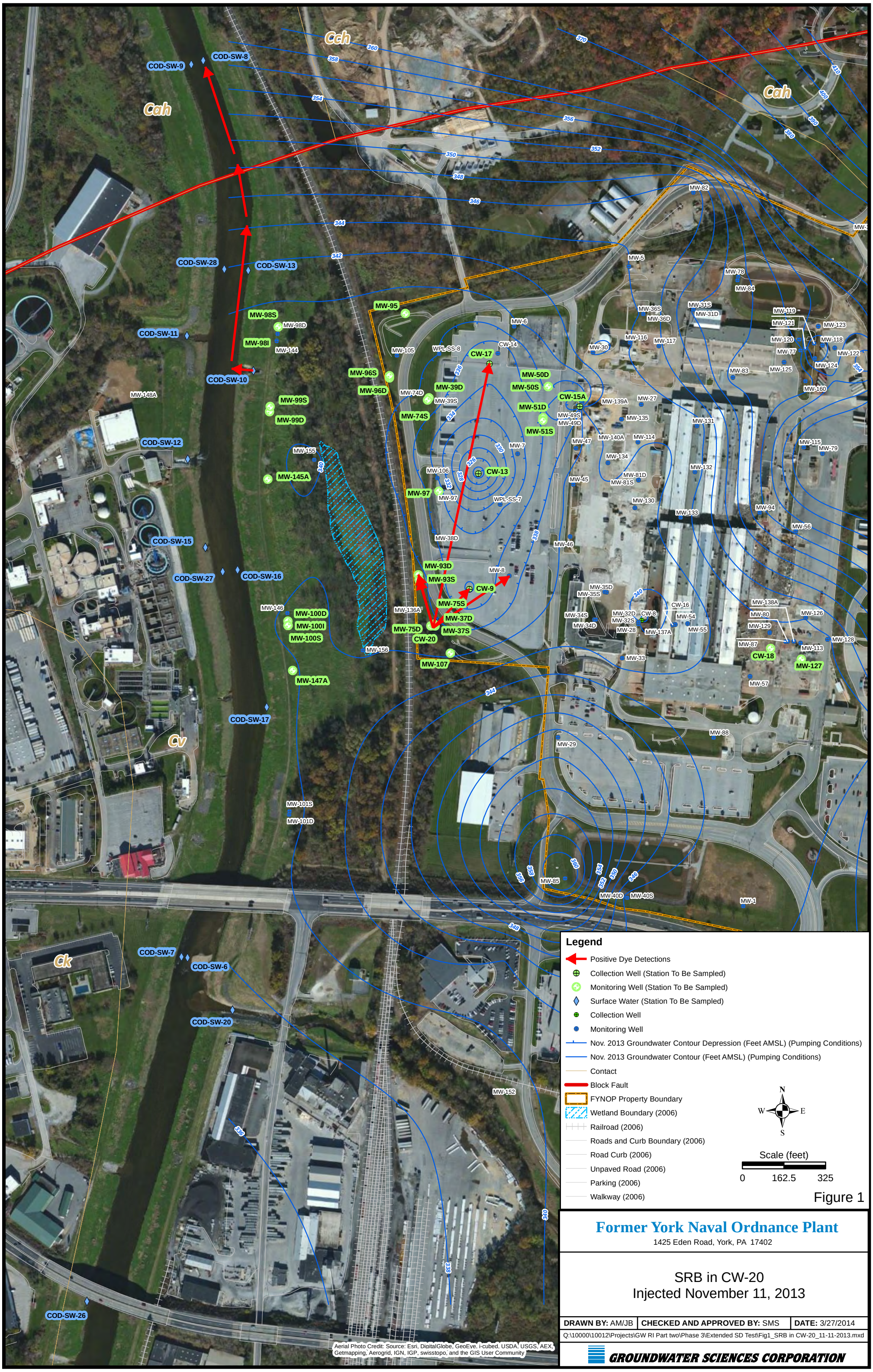
Codorus Creek Discharges Sampling Results
8/22/2013 Through 2/20/2014
Harley-Davidson FYNOP

Analyte	HD-COD-SW-27-0/-0 1/27/2013	HD-COD-SW-27-0/1-0 2/4/2014	HD-COD-SW-27-0/1-0 2/20/2014	HD-COD-SW-28-0/0-0 1/27/2013	HD-COD-SW-28-0/1-0 2/4/2014	HD-COD-SW-28-0/1-0 2/20/2014
Metals (Total) ug/L						
Antimony	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA
Calcium	34000	NA	29000	46000	NA	46000
Chromium	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA
Magnesium	8100	NA	8600	9800	NA	11000
Mercury	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA
Potassium	4300	NA	3700	7100	NA	5500
Selenium	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA
Sodium	27000	NA	38000	36000	NA	73000
Thallium	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA
Metals (Dissolved) ug/L						
Antimony	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA
Miscelanous mg/L						
Alkalinity	96 B	NA	81 B	130 B	NA	120 B
BicarBonate Alkalinity as CaCO3	96 B	NA	81 B	130 B	NA	120 B
CarBonate Alkalinity as CaCO3	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U
Chloride	52	NA	71	70	NA	150
Nitrate as N	4.7	NA	3.8	4.1	NA	3.6
Sulfate	31	NA	26	30	NA	30

Table 2
Groundwater Extraction System Restart Schedule

Days from Start of			
Shut Down	Extraction Well Restart	Date	Task Description
		10/23/2013	Sample extraction wells (CW-8, CW-9, CW-13, CW-15A, and CW-17) for Background and Matrix Interference testing.
		11/22/2013	Complete full Site-wide round of water levels, including off-site locations.
0		11/25/2013	Shut off groundwater extraction system.
8		12/3/2013	Retrieve and deploy dye receptors and collect grab samples at all stations; Download water level recorders.
16		12/11/2013	Retrieve and deploy dye receptors and collect grab samples at all stations; Download water level recorders.
21		12/16/2013	Retrieve and deploy dye receptors and collect grab samples at all stations; Download water level recorders.
22		12/17/2013	Inject tracers in MW-147A, MW-99D, and MW-100D
23-25, 28		12/18,19,20,23/2013	Retrieve and deploy dye receptors and collect grab samples in all Test 2 locations. Collect grab samples at COD-SW-15 and COD-SW-17 at a frequency of 1 to 4 hours for the first 2 days.
32,35		12/27,30/2013	Retrieve and deploy dye receptors and collect grab samples in all Test 2 locations.
38		1/2/2014	Retrieve and deploy dye receptors and collect grab samples in all Test 2 locations.
42		1/6/2014	Retrieve and deploy dye receptors and collect grab samples in all Test 2 locations.
45		1/9/2014	Retrieve and deploy dye receptors and collect grab samples in all Test 2 locations. Download recorders.
50		1/14/2014	Retrieve and deploy dye receptors and collect grab samples in all Test 2 sample locations. Complete full Site-wide round of water levels, including off-site locations (Leidos; GSC for Waterloos). Measure Codorus Creek and tributary flows; sample surface water stations (SW-6,7,8,9 and SW-15 and -17) for VOCs. Install dye receptor stations (cinder block set up) packets in SW-7,SW-16, SW-27,SW-13, SW-28.
56-60		week of 1/20/2014 (all week)	Retrieve and deploy dye receptors and collect grab sample, sample for VOCs, alkalinity, Ca^{2+}, Mg^{2+}, Na^{2+}, K +, Cl-, CO_3^{2-}, HCO_3^{-}, $^{SO4,\ NO3}$ (locations to sample (map): CW-9,CW-13,CW-15A,CW-17,CW-20,MW-100D,MW-100I,MW-100S,MW-37D,MW-37S,MW-39D,MW-50D,MW-50S,MW-51D,MW-51S,MW-74S,MW-75D,MW-75S,MW-93D,MW-93S,MW-95,MW-96D,MW-96S,MW-97,MW-98I,MW-98S,MW-99D,MW-99S,MW-145A,MW-147A,COD-SW-6,COD-SW-7,COD-SW-8,COD-SW-9,COD-SW-10,COD-SW-11,COD-SW-12,COD-SW-13,COD-SW-15,COD-SW-16,COD-SW-17,COD-SW-20,COD-SW-26,COD-SW-27,COD-SW-28).
63		1/27/2014	Inject 50 lbs of Pyranine dye into CW-20 and possibly inject dye into CW-17.
64, 65, 67		1/28,29,31/14	Retrieve and deploy dye receptors and collect grab samples in MW-93S,D; MW-147A; MW-100S,I,D; MW-145A; COD-SW-15, -16, -17, -27.
70		2/3/2014	Retrieve and deploy dye receptors and collect grab samples in all Test 3 sample locations (this includes all of the above (1/20/14) locations except CW-9, CW-13, CW-17, CW-15A, MW-50S, MW-50D, MW-51S, MW-51D). Sample for VOCs at SW-6,7,8,9,15,17.
77		2/10/2014	Retrieve and deploy dye receptors and collect grab samples in all Test 3 sample locations (this includes all of the above (1/20/14) locations except CW-9, CW-13, CW-17, CW-15A, MW-50S, MW-50D, MW-51S, MW-51D).
84-88		week of 2/17/2014	Retrieve and deploy dye receptors and collect grab sample, sample for VOCs, alkalinity, Ca^{2+}, Mg^{2+}, Na^{2+}, Cl-, K+, CO_3^{2-}, HCO_3^{-}, $^{SO4,\ NO3}$ (locations to sample (map): CW-9,CW-13,CW-15A,CW-17,CW-20,MW-100D,MW-100I,MW-100S,MW-37D,MW-37S,MW-39D,MW-50D,MW-50S,MW-51D,MW-51S,MW-74S,MW-75D,MW-75S,MW-93D,MW-93S,MW-95,MW-96D,MW-96S,MW-97,MW-98I,MW-98S,MW-99D,MW-99S,MW-145A,MW-147A,COD-SW-6,COD-SW-7,COD-SW-8,COD-SW-9,COD-SW-10,COD-SW-11,COD-SW-12,COD-SW-13,COD-SW-15,COD-SW-16,COD-SW-17,COD-SW-20,COD-SW-26,COD-SW-27,COD-SW-28).
91		2/24/2014	Retrieve and deploy dye receptors and collect grab samples in all Test 3 sample locations (this includes all of the above (1/20/14) locations except CW-9, CW-13, CW-17, CW-15A, MW-50S, MW-50D, MW-51S, MW-51D).
98		3/3/2014	Retrieve and deploy dye receptors and collect grab samples in all Test 3 sample locations (this includes all of the above (1/20/14) locations except CW-9, CW-13, CW-17, CW-15A, MW-50S, MW-50D, MW-51S, MW-51D). Sample for VOCs at SW-6,7,8,9,15,17.
		3/7/2014	Inject Sulphorhodamine into CW-17.
105		3/10/2014	Retrieve and deploy dye receptors and collect grab samples in all Test 3 sample locations (this includes all of the above (1/20/14) locations except CW-9, CW-13, CW-17, CW-15A, MW-50S, MW-50D, MW-51S, MW-51D).
		3/12 &14/2014	Sample for dye from CW-17 in SW-8, SW-9, SW-10, SW-13, MW-39D, MW-74S, MW-95, MW-96D, MW-96S.
112-116		week of 3/17/2014	Retrieve and deploy dye receptors and collect grab sample, sample for VOCs, alkalinity, Ca^{2+}, Mg^{2+}, Na^{2+}, Cl-, K+, SO4, NO3, CO_3^{2-}, HCO_3^{-} (locations to sample (map): CW-9,CW-13,CW-15A,CW-17,CW-20,MW-100D,MW-100I,MW-100S,MW-37D,MW-37S,MW-39D,MW-50D,MW-50S,MW-51D,MW-51S,MW-74S,MW-75D,MW-75S,MW-93D,MW-93S,MW-95,MW-96D,MW-96S,MW-97,MW-98I,MW-98S,MW-99D,MW-99S,MW-145A,MW-147A,COD-SW-6,COD-SW-7,COD-SW-8,COD-SW-9,COD-SW-10,COD-SW-11,COD-SW-12,COD-SW-13,COD-SW-15,COD-SW-16,COD-SW-17,COD-SW-20,COD-SW-26,COD-SW-27,COD-SW-28, COD-SW-29).
123	-10	3/24/2014	Sample for dye from CW-17 in SW-8, SW-9, SW-10, SW-13, MW-39D, MW-74S, MW-95, MW-96D, MW-96S; install transducers in selected wells to monitor water levels prior to and during system restart.
131	-2	4/1/2014	Sample for dye from CW-17 in SW-8, SW-9, SW-10, SW-13, MW-39D, MW-74S, MW-95, MW-96D, MW-96S.
133	0	4/3/2014	Re-start groundwater extraction well CW-20 and possibly CW-9.
151-152	18-19	4/21 & 22/2014	Sample surface water locations and wells CW-9, CW-20, MW-147A, MW-100S,I, D for VOCs, alkalinity, ions.
153	28	5/1/2014	Site-wide groundwater level monitoring.
165-173	32-40	5/5/2014 - 5/13/2014	Sample for VOCs, alkalinity, Ca^{2+}, Mg^{2+}, Na^{2+}, Cl-, K+, SO4, NO3, CO_3^{2-}, HCO_3^{-} (locations to sample (map): CW-9,CW-13,CW-15A,CW-17,CW-20,MW-100D,MW-100I,MW-100S,MW-114, MW-127, MW-107, MW-132, MW-37D,MW-37S,MW-39D,MW-50D,MW-50S,MW-51D,MW-51S,MW-74S,MW-75D,MW-75S,MW-93D,MW-93S,MW-95,MW-96D,MW-96S,MW-97,MW-98I,MW-98S,MW-99D,MW-99S,MW-145A,MW-147A,COD-SW-6,COD-SW-7,COD-SW-8,COD-SW-9,COD-SW-10,COD-SW-11,COD-SW-12,COD-SW-13,COD-SW-15,COD-SW-16,COD-SW-17,COD-SW-20,COD-SW-26,COD-SW-27,COD-SW-28, COD-SW-29).
179-180	46-47	5/19 & 20/2014	Sample surface water locations and wells CW-9, CW-20, MW-147A, MW-100S,I, D for VOCs, alkalinity, ions.
193-201	60-68	6/2/2014 - 6/10/2014	Sample for VOCs, alkalinity, Ca^{2+}, Mg^{2+}, Na^{2+}, Cl-, K+, SO4, NO3, CO_3^{2-}, HCO_3^{-} (locations to sample (map): CW-9,CW-13,CW-15A,CW-17,CW-20,MW-100D,MW-100I,MW-100S,MW-114, MW-127, MW-107, MW-132, MW-37D,MW-37S,MW-39D,MW-50D,MW-50S,MW-51D,MW-51S,MW-74S,MW-75D,MW-75S,MW-93D,MW-93S,MW-95,MW-96D,MW-96S,MW-97,MW-98I,MW-98S,MW-99D,MW-99S,MW-145A,MW-147A,COD-SW-6,COD-SW-7,COD-SW-8,COD-SW-9,COD-SW-10,COD-SW-11,COD-SW-12,COD-SW-13,COD-SW-15,COD-SW-16,COD-SW-17,COD-SW-20,COD-SW-26,COD-SW-27,COD-SW-28, COD-SW-29).
202-203	69-70	6/11 & 12/2014	Make adjustments to the pumping rates of CW-9 and CW-20 if needed.
207	74	6/16/2014	Possibly restart other extraction wells while monitoring and sampling.
Testing could be extended, depending upon results, delaying subsequent activities and tasks.			

Figures



Legend

- Positive Dye Detections
- Collection Well (Station To Be Sampled)
- Monitoring Well (Station To Be Sampled)
- Surface Water (Station To Be Sampled)
- Collection Well
- Monitoring Well
- Nov. 2013 Groundwater Contour Depression (Feet AMSL) (Pumping Conditions)
- Nov. 2013 Groundwater Contour (Feet AMSL) (Pumping Conditions)
- Contact
- Block Fault
- FYNOP Property Boundary
- Wetland Boundary (2006)
- Railroad (2006)
- Roads and Curb Boundary (2006)
- Road Curb (2006)
- Unpaved Road (2006)
- Parking (2006)
- Walkway (2006)

N
W E
S

Scale (feet)
0 162.5 325

Figure 1

Former York Naval Ordnance Plant

1425 Eden Road, York, PA 17402

SRB in CW-20
Injected November 11, 2013

DRAWN BY: AM/JB	CHECKED AND APPROVED BY: SMS	DATE: 3/27/2014

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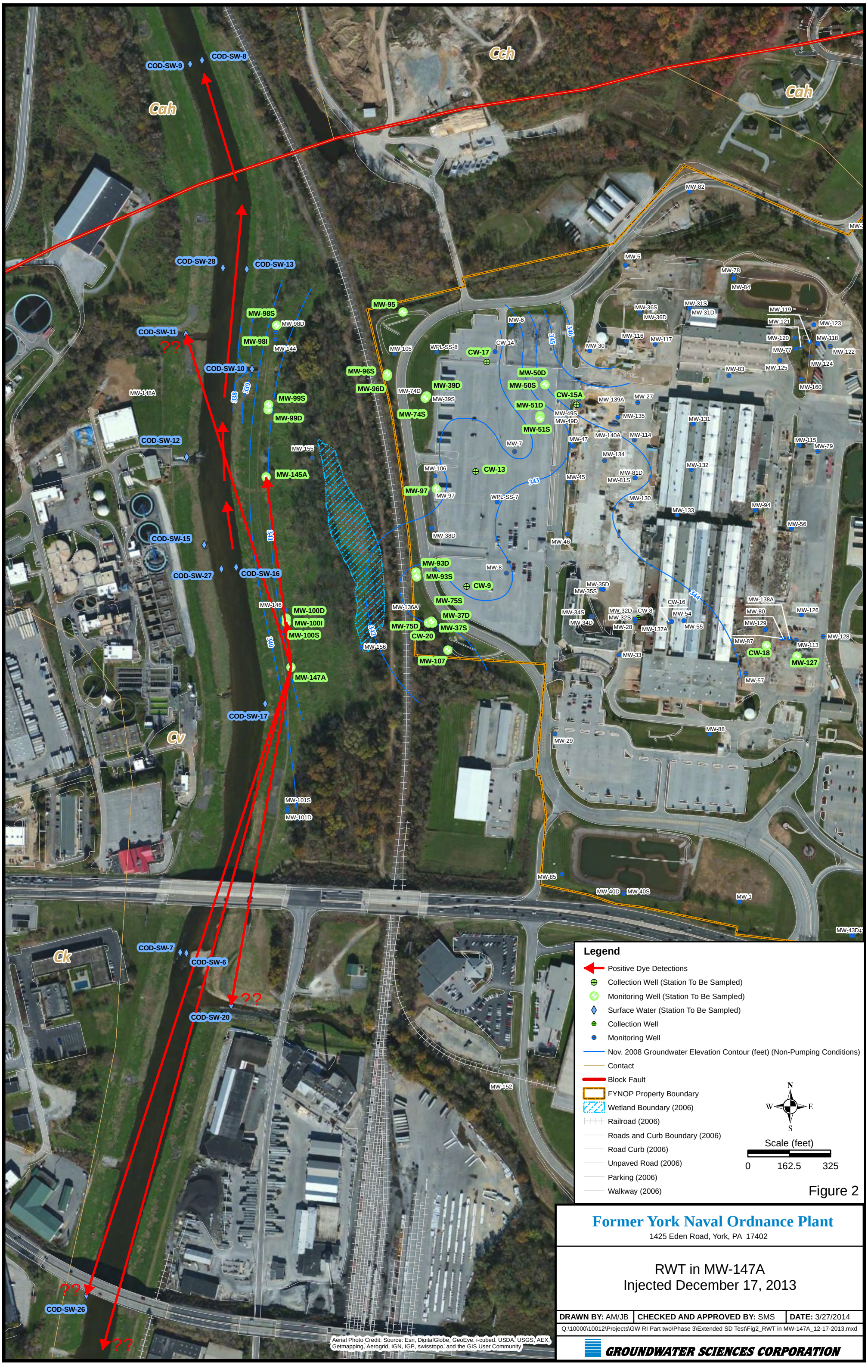

Legend

- Positive Dye Detections
- Collection Well (Station To Be Sampled)
- Monitoring Well (Station To Be Sampled)
- Surface Water (Station To Be Sampled)
- Collection Well
- Monitoring Well
- Nov. 2008 Groundwater Elevation Contour (feet) (Non-Pumping Conditions)
- Contact
- Block Fault
- FYNOP Property Boundary
- Wetland Boundary (2006)
- Railroad (2006)
- Roads and Curb Boundary (2006)
- Road Curb (2006)
- Unpaved Road (2006)
- Parking (2006)
- Walkway (2006)

N W E S

Scale (feet)

0 162.5 325

Figure 2

Aerial Photo Credit: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Former York Naval Ordnance Plant

1425 Eden Road, York, PA 17402

RWT in MW-147A
Injected December 17, 2013

DRAWN BY: AM/JB	CHECKED AND APPROVED BY: SMS	DATE: 3/27/2014

Q:\10000\10012\Projects\GW RI Part two\Phase 3\Extended SD Test\Fig2_RWT in MW-147A_12-17-2013.mxd

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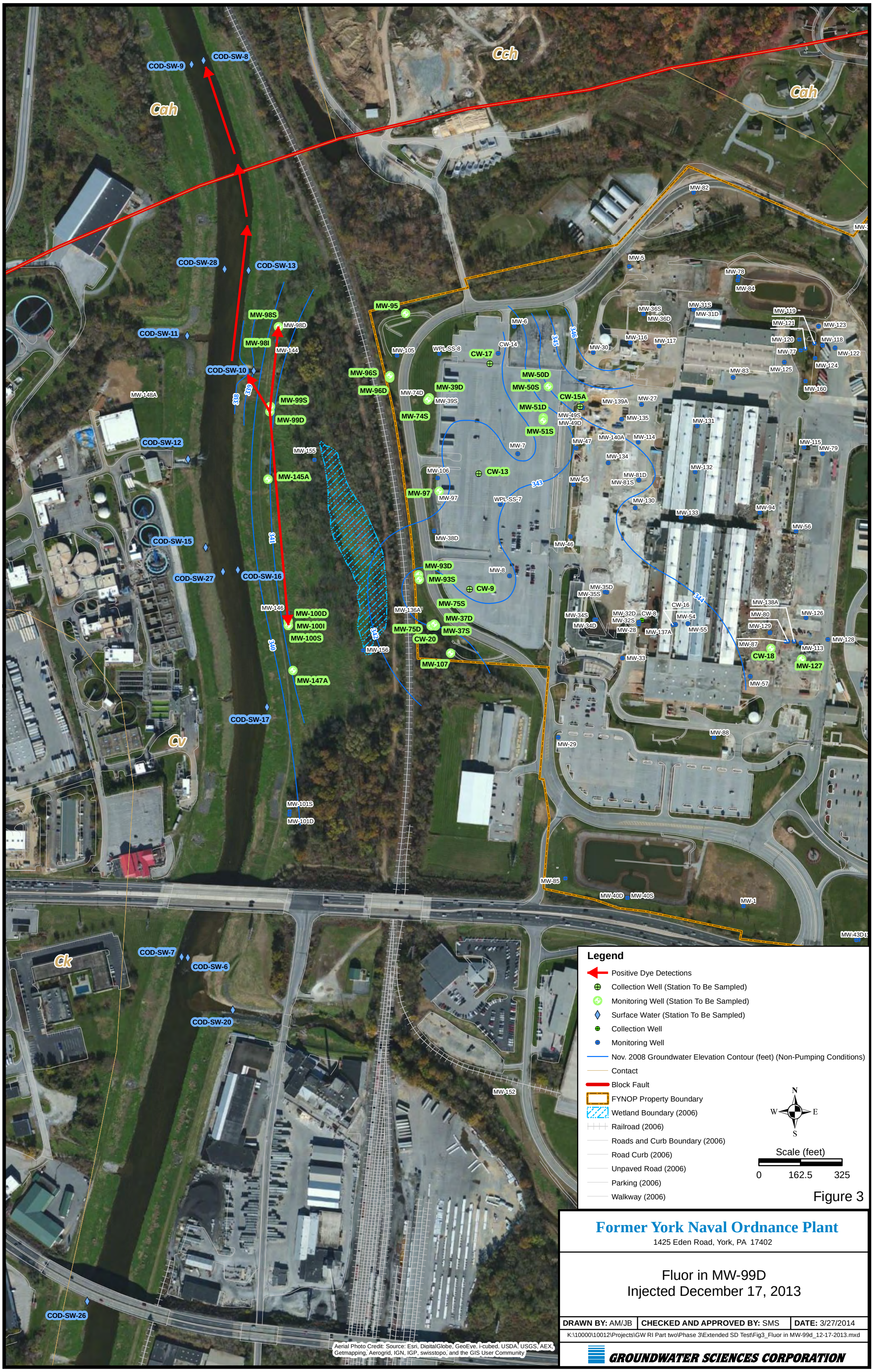
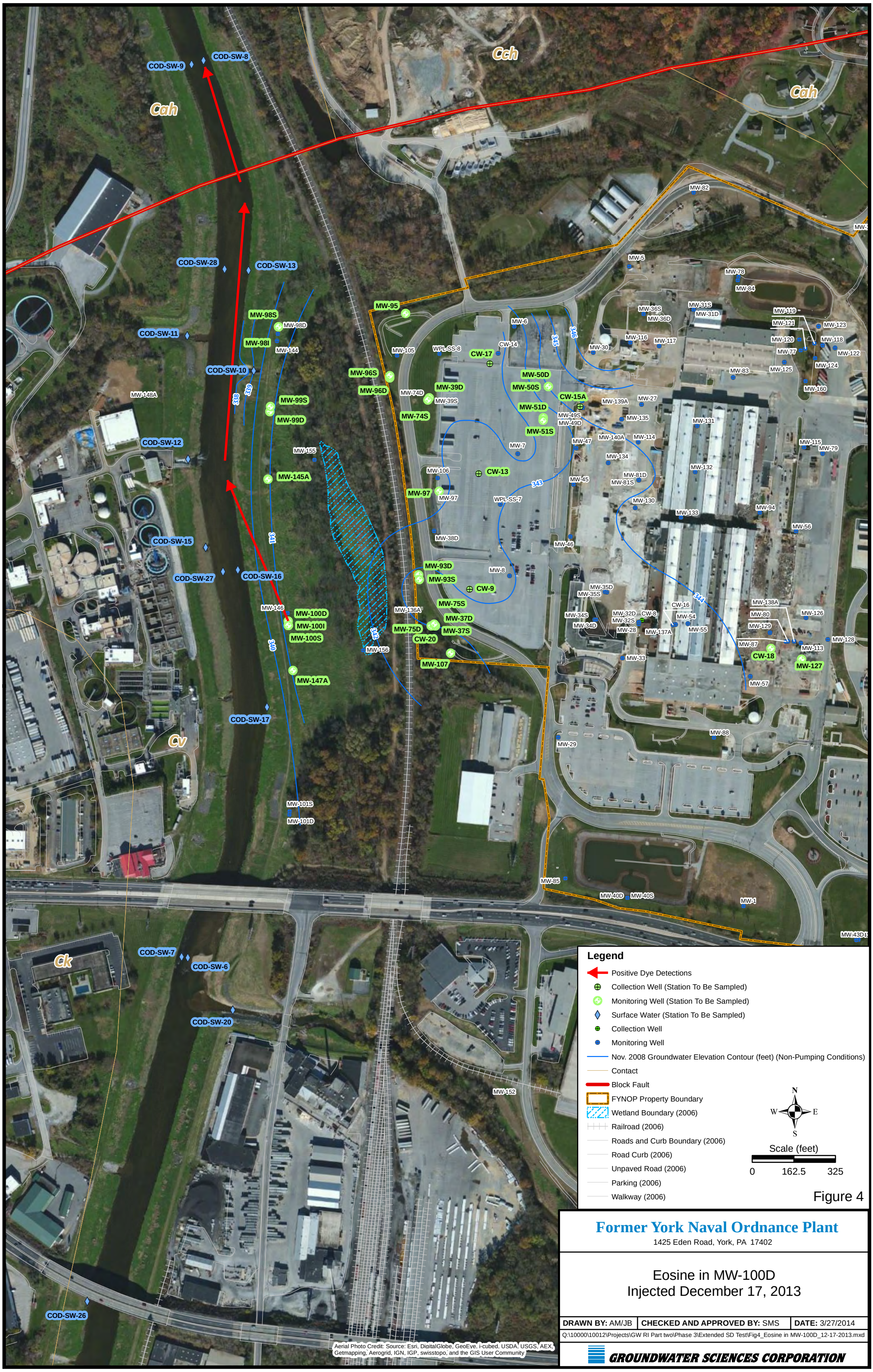

Cch
Cah
Cah
Cv
Ck
COD-SW-9
COD-SW-8
COD-SW-28
COD-SW-13
COD-SW-11
COD-SW-10
COD-SW-12
COD-SW-15
COD-SW-27
COD-SW-16
COD-SW-17
COD-SW-7
COD-SW-6
COD-SW-20
COD-SW-26
MW-98S
MW-98D
MW-98I
MW-144
MW-148A
MW-99S
MW-99D
MW-155
MW-145A
MW-146
MW-100D
MW-100I
MW-100S
MW-147A
MW-101S
MW-101D
MW-95
MW-96S
MW-96D
MW-74D
MW-39D
MW-39S
MW-74S
MW-97
MW-106
MW-38D
MW-93D
MW-93S
MW-136A
MW-75S
MW-37D
MW-75D
MW-37S
CW-20
MW-156
MW-107
MW-105
WPL-SS-8
CW-17
CW-14
MW-6
MW-7
CW-13
WPL-SS-7
MW-8
CW-9
MW-5
MW-82
MW-78
MW-84
MW-36S
MW-36D
MW-31S
MW-31D
MW-119
MW-121
MW-123
MW-116
MW-117
MW-120
MW-118
MW-30
MW-77
MW-122
MW-124
MW-83
MW-125
MW-160
MW-50D
MW-50S
CW-15A
MW-51D
MW-51S
MW-139A
MW-27
MW-49S
MW-49D
MW-135
MW-131
MW-47
MW-140A
MW-114
MW-115
MW-79
MW-134
MW-132
MW-81D
MW-81S
MW-45
MW-130
MW-133
MW-94
MW-56
MW-46
MW-35D
MW-35S
MW-34S
MW-34D
MW-32D
MW-32S
CW-8
CW-16
MW-54
MW-55
MW-28
MW-137A
MW-138A
MW-80
MW-129
MW-126
MW-128
MW-87
CW-18
MW-113
MW-127
MW-33
MW-57
MW-88
MW-29
MW-85
MW-40D
MW-40S
MW-1
MW-43D1
MW-152
339
338
341
340
342
343
345
346
344
Aerial Photo Credit: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Legend
Positive Dye Detections
Collection Well (Station To Be Sampled)
Monitoring Well (Station To Be Sampled)
Surface Water (Station To Be Sampled)
Collection Well
Monitoring Well
Nov. 2008 Groundwater Elevation Contour (feet) (Non-Pumping Conditions)
Contact
Block Fault
FYNOP Property Boundary
Wetland Boundary (2006)
Railroad (2006)
Roads and Curb Boundary (2006)
Road Curb (2006)
Unpaved Road (2006)
Parking (2006)
Walkway (2006)
N
W
E
S
Scale (feet)
0
162.5
325
Figure 3
Former York Naval Ordnance Plant
1425 Eden Road, York, PA 17402
Fluor in MW-99D
Injected December 17, 2013
DRAWN BY: AM/JB
CHECKED AND APPROVED BY: SMS
DATE: 3/27/2014
K:\10000\10012\Projects\GW RI Part two\Phase 3\Extended SD Test\Fig3_Fluor in MW-99d_12-17-2013.mxd
GROUNDWATER SCIENCES CORPORATION



Legend

- Positive Dye Detections
- Collection Well (Station To Be Sampled)
- Monitoring Well (Station To Be Sampled)
- Surface Water (Station To Be Sampled)
- Collection Well
- Monitoring Well
- Nov. 2008 Groundwater Elevation Contour (feet) (Non-Pumping Conditions)
- Contact
- Block Fault
- FYNOP Property Boundary
- Wetland Boundary (2006)
- Railroad (2006)
- Roads and Curb Boundary (2006)
- Road Curb (2006)
- Unpaved Road (2006)
- Parking (2006)
- Walkway (2006)

N
W E
S

Scale (feet)
0 162.5 325

Figure 4

Former York Naval Ordnance Plant

1425 Eden Road, York, PA 17402

Eosine in MW-100D
Injected December 17, 2013

DRAWN BY: AM/JB	CHECKED AND APPROVED BY: SMS	DATE: 3/27/2014

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GROUNDWATER SCIENCES CORPORATION

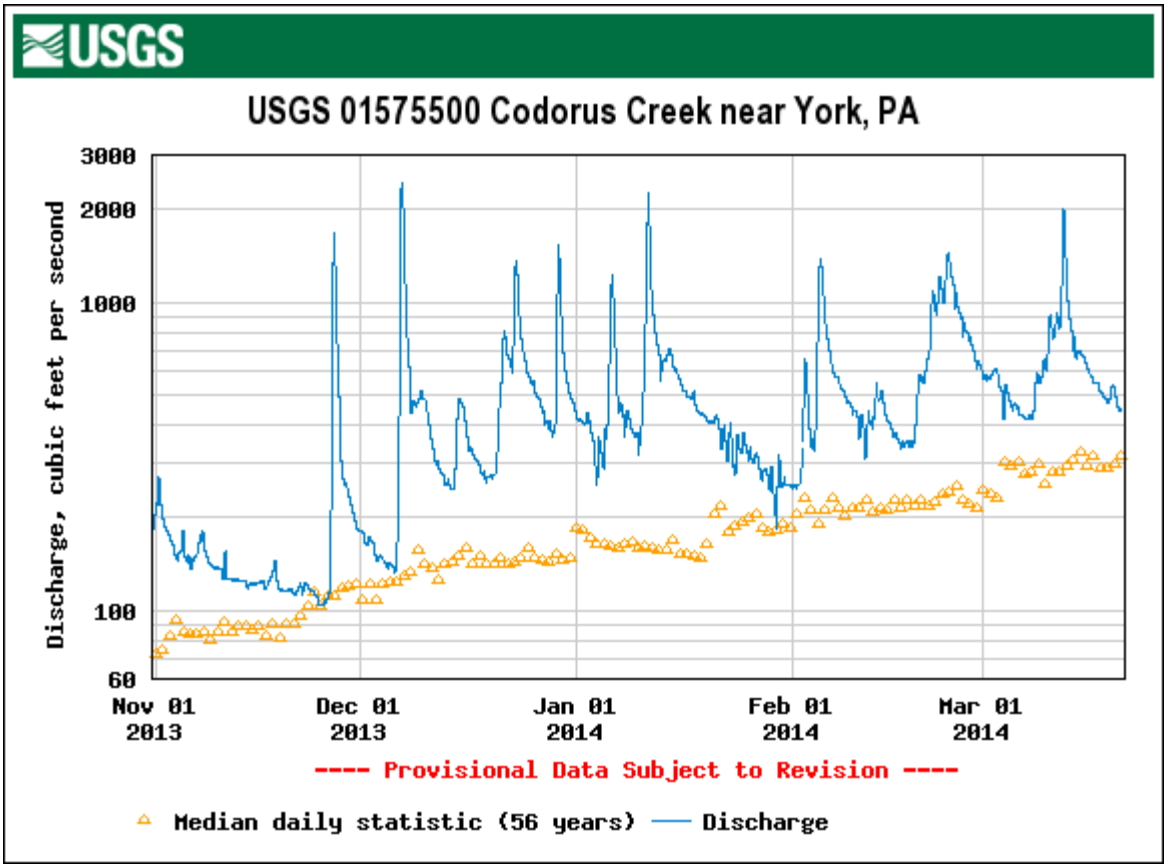
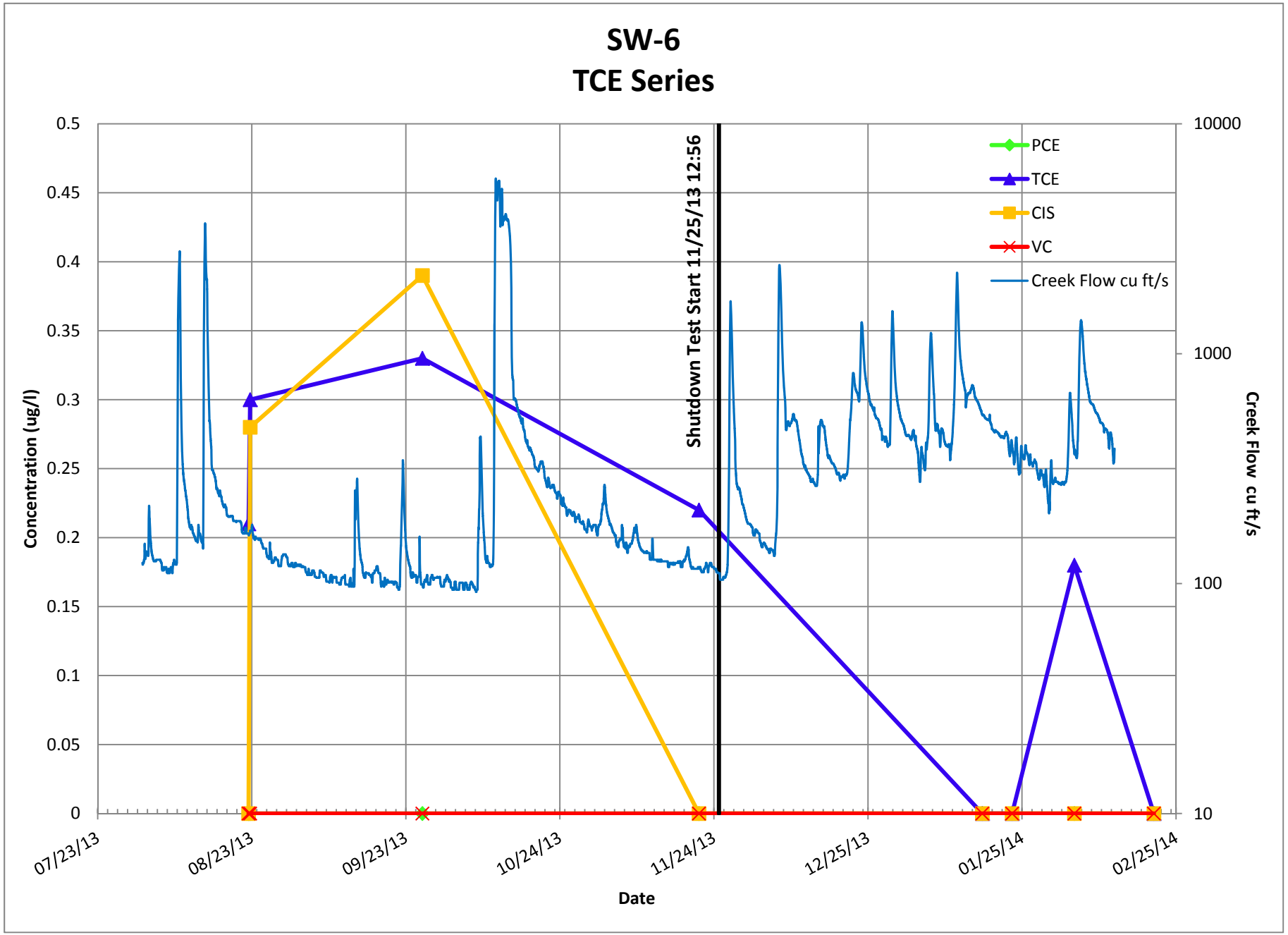
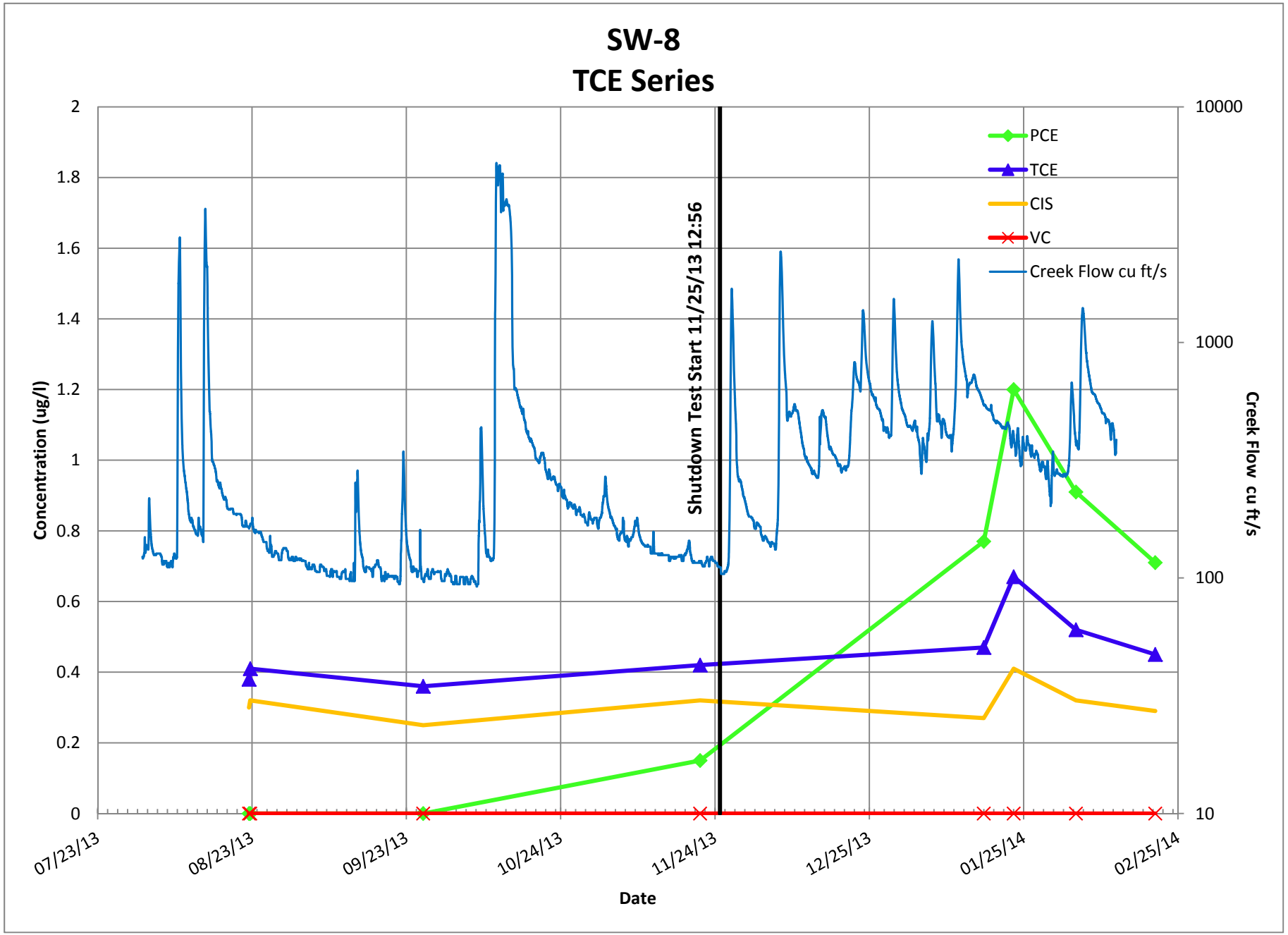
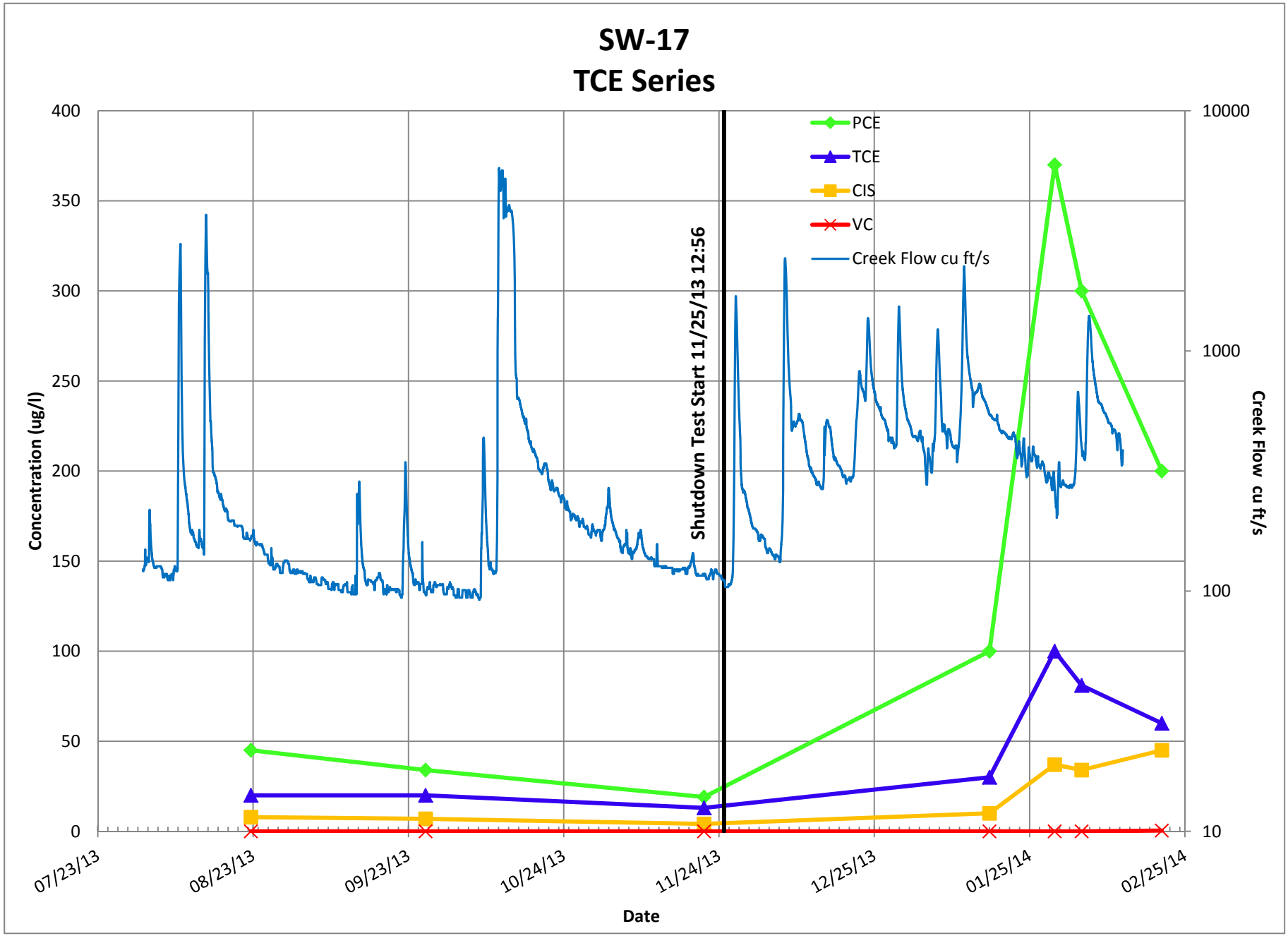


Figure 5 - Codorus Creek Gauging Station at York, PA


SW-6
TCE Series
Concentration (ug/l)
Creek Flow cu ft/s
Date
Shutdown Test Start 11/25/13 12:56
PCE
TCE
CIS
VC
Creek Flow cu ft/s
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
10000
1000
100
10
07/23/13
08/23/13
09/23/13
10/24/13
11/24/13
12/25/13
01/25/14
02/25/14


SW-8
TCE Series
Concentration (ug/l)
Creek Flow cu ft/s
Date
Shutdown Test Start 11/25/13 12:56
PCE
TCE
CIS
VC
Creek Flow cu ft/s
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
10000
1000
100
10
07/23/13
08/23/13
09/23/13
10/24/13
11/24/13
12/25/13
01/25/14
02/25/14


SW-17
TCE Series
PCE
TCE
CIS
VC
Creek Flow cu ft/s
Shutdown Test Start 11/25/13 12:56
Concentration (ug/l)
Creek Flow cu ft/s
Date
400
350
300
250
200
150
100
50
0
10000
1000
100
10
07/23/13
08/23/13
09/23/13
10/24/13
11/24/13
12/25/13
01/25/14
02/25/14

5 Days to MW-147A
11 Days to SW-17
20 Days to MW-75S

Legend

- Positive Dye Detections
- Collection Well (Station To Be Sampled)
- Monitoring Well (Station To Be Sampled)
- Surface Water (Station To Be Sampled)
- Collection Well
- Monitoring Well
- Nov. 2008 Groundwater Elevation Contour (feet) (Non-Pumping Conditions)
- Contact
- Block Fault
- FYNOP Property Boundary
- Wetland Boundary (2006)
- Railroad (2006)
- Roads and Curb Boundary (2006)
- Road Curb (2006)
- Unpaved Road (2006)
- Parking (2006)
- Walkway (2006)

N
W E
S

Scale (feet)
0 162.5 325

Figure 9

Former York Naval Ordnance Plant

1425 Eden Road, York, PA 17402

Green 8 in CW-20
Injected January 31, 2014

DRAWN BY: AM/JB	CHECKED AND APPROVED BY: SMS	DATE: 3/27/2014

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Figure 10

Former York Naval Ordnance Plant

1425 Eden Road, York, PA 17402

Restart Testing Sampling Stations

DRAWN BY: AGM	CHECKED AND APPROVED BY: SMS	DATE:3/21/2014

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Appendix A

Modification to Addendum 11 Scope and Schedule

GROUNDWATER SCIENCES CORPORATION

2601 Market Place Street, Suite 310
Harrisburg, PA 17110-9340
(717) 652-6832
Fax: (717) 657-1611

December 30, 2013

Ms. Pamela S. Trowbridge, P.G.
PA Department of Environmental Protection
South Central Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110

Mr. Griff Miller
Remedial Project Manager
U.S. Environmental Protection Agency
1650 Arch Street (3LC30)
Philadelphia, PA 19103

Re: Modification to Addendum 11 Scope and Schedule - Field Sampling Plan for Part 2 of the Supplemental Groundwater Remedial Investigation (FSP) Former York Naval Ordnance Plant (fYNOP)

Dear Ms. Trowbridge and Mr. Miller:

Recent weekly field program status summaries for fYNOP discussed a proposed pilot test that would involve reconfiguration of the groundwater extraction and treatment system (GWETS), and would test the effectiveness of groundwater hot spot remediation in a proposed building site on an expedited schedule. The work plan for the proposed pilot test was to be submitted for review by USEPA and PADEP during the week of December 23. As a result of discussions with the fYNOP Technical Team in a meeting on December 20, 2013, we propose delaying development of the pilot test plan and extending the ongoing groundwater extraction and treatment system shutdown and tracer testing. The objective of the extended shut down period and additional testing is to enable us to better evaluate site characteristics and groundwater discharge to the creek under non-pumping conditions.

The fYNOP site is unique in that most of the characterization of the site has occurred under an interim remedy. As our focus switches to a final remedial action, we are exploring a number of conditions that are impacted by the GWETS, and would like to take full advantage of the system being off.

On 10/21/2013, you received Addendum 11 of the fYNOP FSP, which you subsequently reviewed and approved by emails.

- GSC has completed Test 1 (injection of tracer dye in Well CW-20), and preliminary results of capture of the tracer by the groundwater extraction system and subsequent discharge of dye to Codorus Creek were reported to you by email on 11/13/2013.
- Shut down of the groundwater extraction system was initiated on 11/25/2013.

- Test 2 was initiated 22 days after shutdown of the extraction system. Three different dyes were injected into three wells along the east bank of Codorus Creek on 12/17/2013. Within 2 days, the dye injected into MW-99D surfaced near the mouth of Johnsons Run, and quickly dissipated as it flowed into the creek. While other dyes have not been seen discharging to the surface, it is very likely that discharges to the creek would not be visually detectible. We are awaiting laboratory analyses of grab samples and dye receptors.

According to the schedule for completion of Addendum 11, monitoring and sampling for tracers are scheduled to continue through January 15, 2014. On or about the 15th, provided the testing would proceed as anticipated, a round of surface water samples would be collected for fYNOP chemicals of concern (COCs) and surface water flows would be measured, if physically possible. The surface water samples would be taken after the extraction system was shut down for approximately 50 days, sufficient time for natural groundwater flow to the creek from the Site to be reestablished.

As a result of some of our discoveries and considerations for remedial action alternatives for the fYNOP site, we would like to extend the extraction and treatment system shutdown, perform additional dye tracer tests, and conduct additional rounds of surface water sampling. We feel we would gain considerable knowledge about the groundwater system and its interconnection with Codorus Creek that will play an important role in the remedial alternatives analysis, and that the most effective time to do this testing is within the next few months by extending the shutdown of the groundwater extraction system.

Specifically, we propose the following steps be added to the Addendum 11 work scope:

1. The testing and monitoring will continue as described in Addendum 11 through January 15, which marks the currently planned end of the shutdown test. Testing and monitoring includes sampling of surface water stations. Samples will be analyzed for VOCs, common ions and alkalinity, as planned. If possible, flow in the creek and tributaries will be gauged. High creek flows create unsafe conditions for measuring stream flows.
2. The restart of the GWETS will be delayed approximately 2 months to allow additional testing under natural groundwater flow conditions.
3. The dye tracer monitoring as described in Addendum 11 will continue on a weekly frequency until all injected dyes have been detected and sufficient information has been collected to see a concentration peak and dissipation.
4. Additional dye tracing is being considered, however there is concern that a unique dye may not be available, and initial recommendations have been received to wait until some of the dyes already used have passed through the system. If unique dyes can be identified, or other ways to differentiate the previous tracers from future tracers, can be determined, the following tests will be performed:
    a. Additional dye (25 lbs of Sulphorhodamine B) may be injected into Well CW-20. This is the same amount and dye type that was injected into this well during Test 1. During Test 1 the injected dye was drawn to extraction well CW-9 within 18 hours of injection, demonstrating an efficient karst connection from the deep karst in the southwest corner of the West Parking Lot (SW WPL) to the groundwater extraction system. This reinjection would occur with the extraction system off, and will test the route and travel time of groundwater from the SW WPL to Codorus Creek under natural (non-pumping) conditions. Monitoring of stations MW-93S&D, MW-147A, MW-100 S,I&D, MW-145A, and COD-SW-17 for dyes will be conducted every one to three days for two weeks after injection, and then drop to weekly.

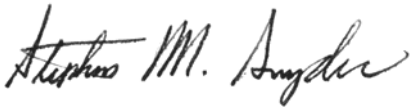
b. A new dye tracer may be injected into the large cavern in CW-17, the extraction well in the north-central portion of the WPL. This well controls groundwater migration from two hot spots. Due to the size of the cavern, we suspect there is an efficient conduit to Codorus Creek. Better understanding the route will assist us in evaluating remedial alternatives. An array of wells would be used as monitoring points, and additional stream sampling points would be added.

5. Codorus Creek surface water samples upstream of the Site (Stations COD-SW-6 and COD-SW-7) and downstream of the Site (Stations COD-SW-8 and COD-SW-9) will be sampled for VOCs, common ions and alkalinity every two (2) weeks (four times), following the sampling and measurements on or about January 14, 2014. In addition, surface water samples will be collected every four (4) weeks (two times) at stations COD-10, -11, -12, -15, -17, -20 and -23, and also analyzed for VOCs, common ions and alkalinity. See Figure 2 from Addendum 11, also attached to this letter for locations of sample stations. The frequencies and the locations of samples may be altered based on the results. In addition, a number of wells will be sampled on a similar frequency for the same parameters: wells along the levee, wells along the western edge of the WPL, and wells in close proximity to the hot spots.

6. Based on the chemical results of water from the creek, spring discharges to the creek, and groundwater samples from wells, as well as results of the tracer testing, extraction wells CW-9, CW-13 and CW-17 may be turned on individually after the extended shutdown period. The response to the reactivation will be monitored by sampling of surface water and wells, and by measuring water levels in wells. This information will be used to further characterize the groundwater flow pathways and prioritize treatment alternatives for the final Site remedial alternatives analysis.

We appreciate your continued attention to the fYNOP project as we wrap up the characterization and move into evaluation of remedial alternatives. We ask that you review this plan for extending and expanding the testing originally described in Addendum 11, and provide approval or concurrence. I am available to answer questions. Please do not hesitate to contact me at (717) 901-8187.

Sincerely,
GROUNDWATER SCIENCES CORPORATION

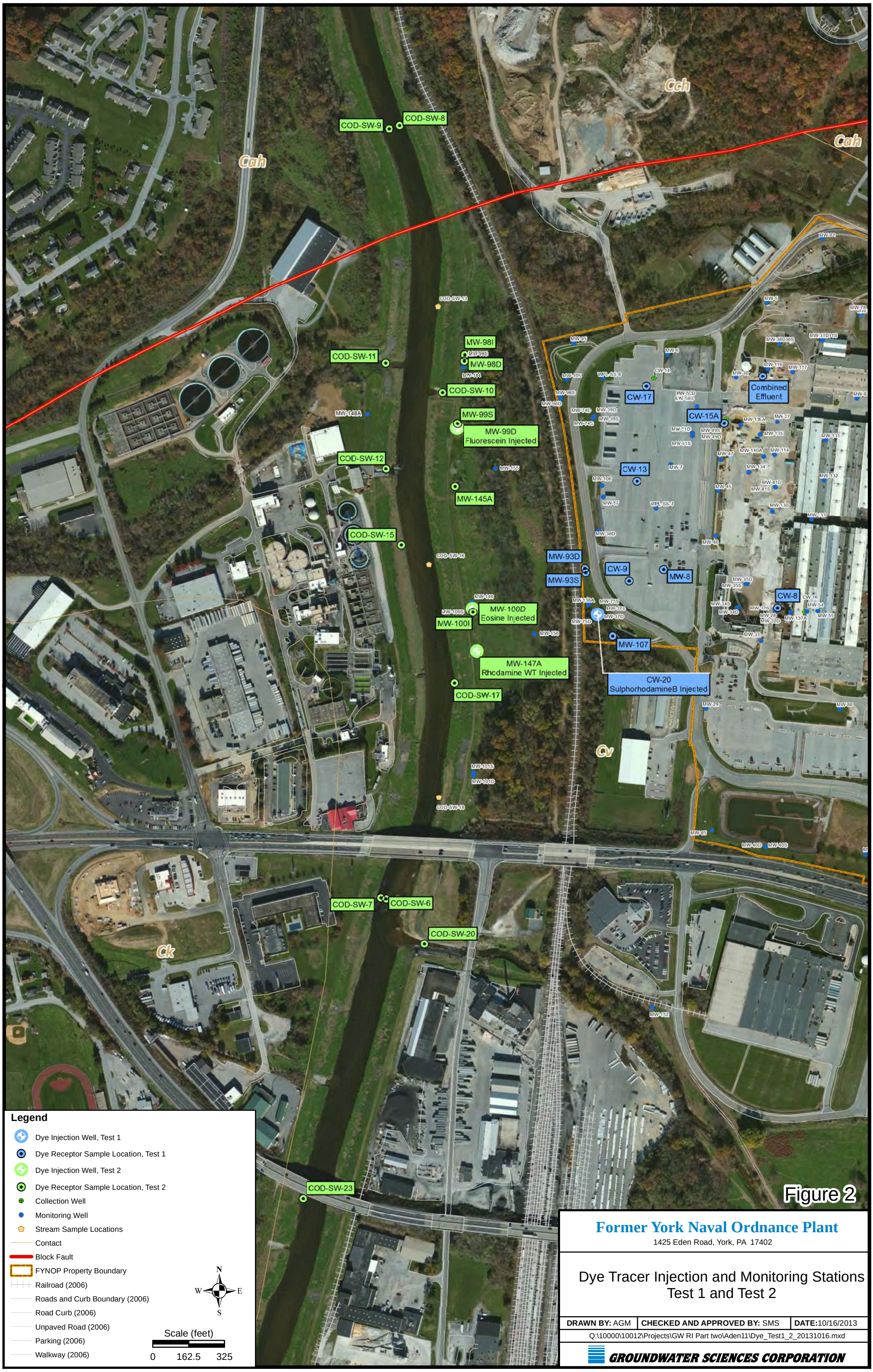


Stephen M. Snyder, P.G.
Senior Associate

SMS/jms

Attachment

cc: Sharon R. Fisher, CHMM (Harley-Davidson)
Hamid Rafiee (USACE)
Ralph T. Golia, P.G. (AMOED)


Cah
Cah
Cch
Cv
Ck
COD-SW-9
COD-SW-8
COD-SW-11
COD-SW-10
COD-SW-12
COD-SW-15
COD-SW-16
COD-SW-17
COD-SW-18
COD-SW-6
COD-SW-7
COD-SW-20
COD-SW-23
MW-98I
MW-98S
MW-98D
MW-99S
MW-99D
Fluorescein Injected
MW-145A
MW-93D
MW-93S
MW-100D
Eosine Injected
MW-100I
MW-147A
Rhodamine WT Injected
CW-20
SulphorhodamineB Injected
MW-107
CW-17
CW-15A
CW-13
CW-9
MW-8
CW-8
Combined
Effluent
MW-148A
MW-152
Legend
Dye Injection Well, Test 1
Dye Receptor Sample Location, Test 1
Dye Injection Well, Test 2
Dye Receptor Sample Location, Test 2
Collection Well
Monitoring Well
Stream Sample Locations
Contact
Block Fault
FYNOP Property Boundary
Railroad (2006)
Roads and Curb Boundary (2006)
Road Curb (2006)
Unpaved Road (2006)
Parking (2006)
Walkway (2006)
N
W
E
S
Scale (feet)
0
162.5
325
Figure 2
Former York Naval Ordnance Plant
1425 Eden Road, York, PA 17402
Dye Tracer Injection and Monitoring Stations
Test 1 and Test 2
DRAWN BY: AGM
CHECKED AND APPROVED BY: SMS
DATE:10/16/2013
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GROUNDWATER SCIENCES CORPORATION